



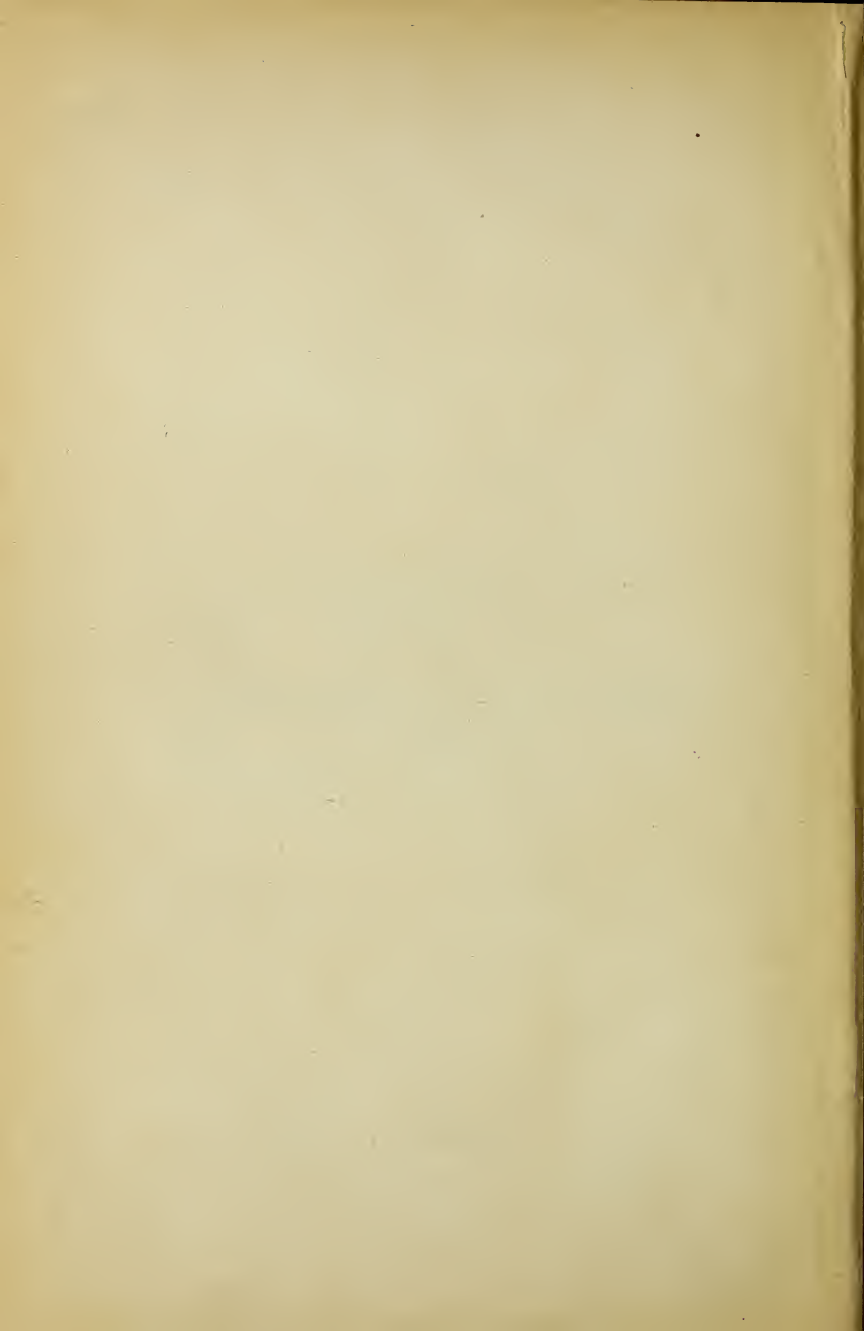
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SIMPLIFICATION OF THE LETTERS
OF THE ALPHABET

AND

*Method of Teaching Deaf-Mutes
to Speak.*



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1890

SIMPLIFICATION OF THE LETTERS
OF THE ALPHABET
AND
METHOD OF TEACHING DEAF-MUTES
TO SPEAK.

BY

Juan Pablo Bonet,

*Confidential Servant of His Majesty, Attendant on the Person of the
Captain-General of Artillery of Spain, and Secretary
to the Constable of Castile.*

DEDICATED TO

His Majesty our Lord the King Don Philip III.

MADRID—FRANCISCO ABARCA DE ANGULO—1620.

Sic natura vincula solvit artis, ita ars natura vincula solvit.—Motto on Title Page.

TRANSLATED FROM THE ORIGINAL SPANISH BY

H. N. DIXON, M.A., F.L.S. ;

WITH A HISTORICAL INTRODUCTION BY

A. FARRAR, F.G.S.

1890.

For Price, etc., see Note to Preface.

P R E F A C E.

THE historical interest of Bonet's treatise, not only as the first of its kind ever published, but also from its intrinsic merits, has long been recognized; but the great rarity of the work and the language in which it is written have prevented the possibility of a more intimate knowledge of it than was afforded by the meagre epitomes which have hitherto appeared.

Several attempts at a translation have been made before now. One was made into Dutch by Dr. C. Guyot, who with his brother formed the Guyot Library, at the Institution at Groningen, Holland, perhaps the most unrivalled collection of books in existence relating to the education of deaf-mutes and cognate subjects. This translation was never published. M. Weiss, of Munich, was in 1838 occupied with another in German. At present a French translation, which, however, is in many parts condensed, is in progress in a monthly journal; and in Spain a reprint of the original, with a historical preface, is shortly to be issued. The present English translation is the outcome of the suggestion of a few friends interested in the matter, who desired to see one made from an original copy in my possession.

Mr. Dixon, of Northampton, himself engaged in the tuition of the deaf, gratuitously undertook the work, and it is due to him that this should be fully acknowledged, as the publication would not have been otherwise practicable.

Advantage has been taken of the opportunity to present a historical account of Bonet and his predecessors, so that an additional interest might be imparted to his work by detailing the circumstances which ultimately led to its publication.

The very fragmentary character of the materials at my disposal has rendered anything like a connected narrative out of the question. I have therefore simply placed them before the reader, with such historical elucidation as was needful to make them intelligible. Not having had the advantage of travel in the land of Ponce de Leon, and also in view of the forthcoming reprint of the original work, I lay no claim to completeness. Short of that, however, every endeavour has been made to verify and add to what was already known, and I am confident the result will be found to be not inferior to anything previously attempted. The original authorities have in almost every instance been consulted, and, in treating of the main subject, are referred to in notes. A list is added of such books as refer more or less to it during the time that elapsed before Hervas y Panduro published the first connected account. My aim has been to keep to facts and the conclusions which could legitimately be drawn from them, and I trust to the reader's kindness to bear this in mind should he have

any reason for dissatisfaction with the literary execution of this part of the volume.

The original work contains eight plates representing the one-hand manual alphabet, which, being almost identical with the one now used in various parts of the world, it has not been thought necessary to reproduce.

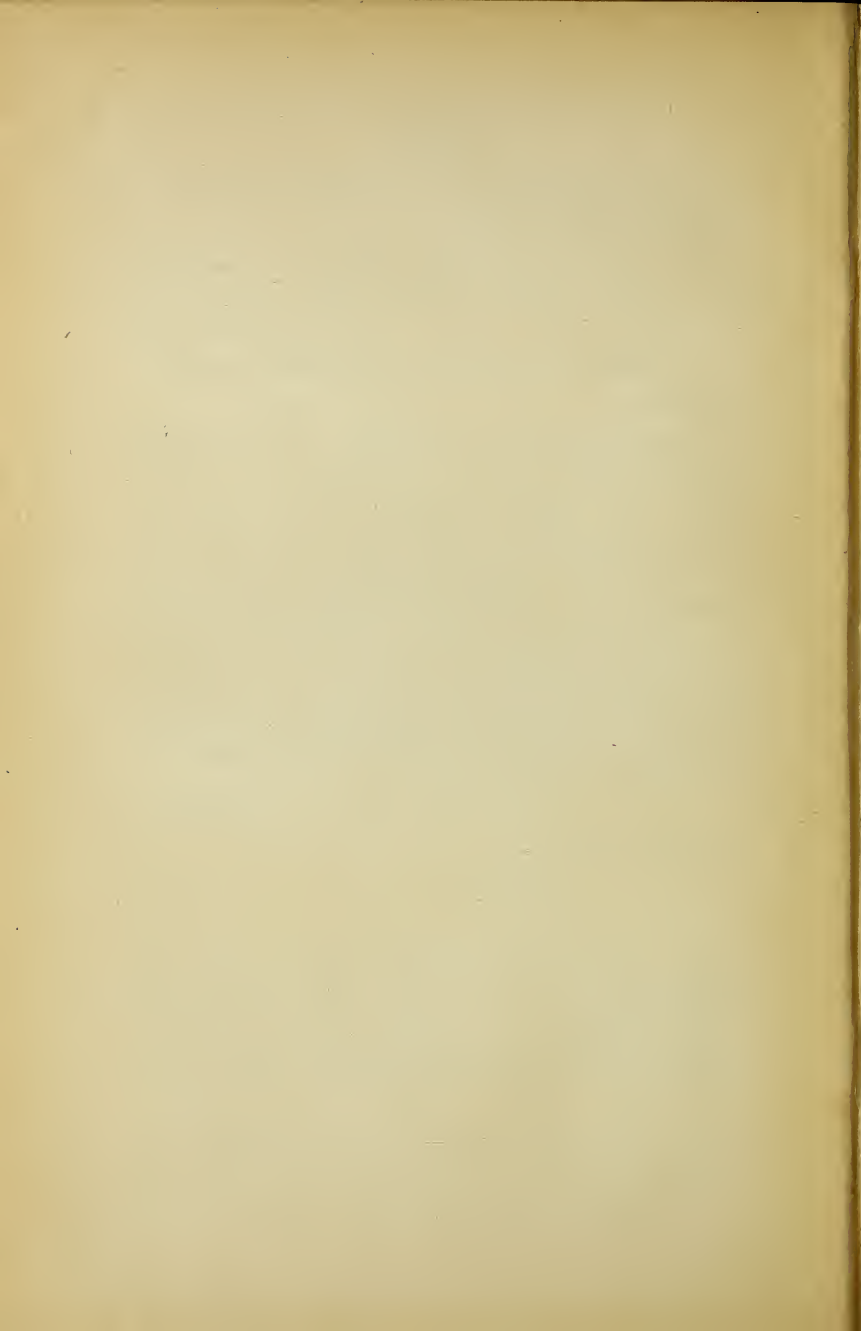
I have to express my thanks to the following gentlemen, who, by notes, translations, and loans of books, have rendered valuable assistance :—Prof. E. A. Fay, of the National Deaf-Mute College, Washington, U.S.A. ; Mr. James Howard, Headmaster of the Institution for Deaf-Mutes, Doncaster ; Mr. W. H. Bishop, formerly instructor in the New York Institution ; Señor Manuel Blasco, of the Institution at Madrid ; Dr. A. W. Alings and M. Renyl, of the Institution at Groningen ; the Rev. T. Arnold, of Northampton ; and Mr. Dixon.

A. FARRAR.

September 1896.

NOTE.—*This work will be supplied on application, accompanied by post-office order, addressed to A. Farrar, junr., The Grange, Beech Grove, Harrogate.*

Prices (nett and post free) : the United Kingdom, 3s. 6d. ; United States and Canada, 1 dollar ; France, etc., 5 francs ; Germany, 4 marks.



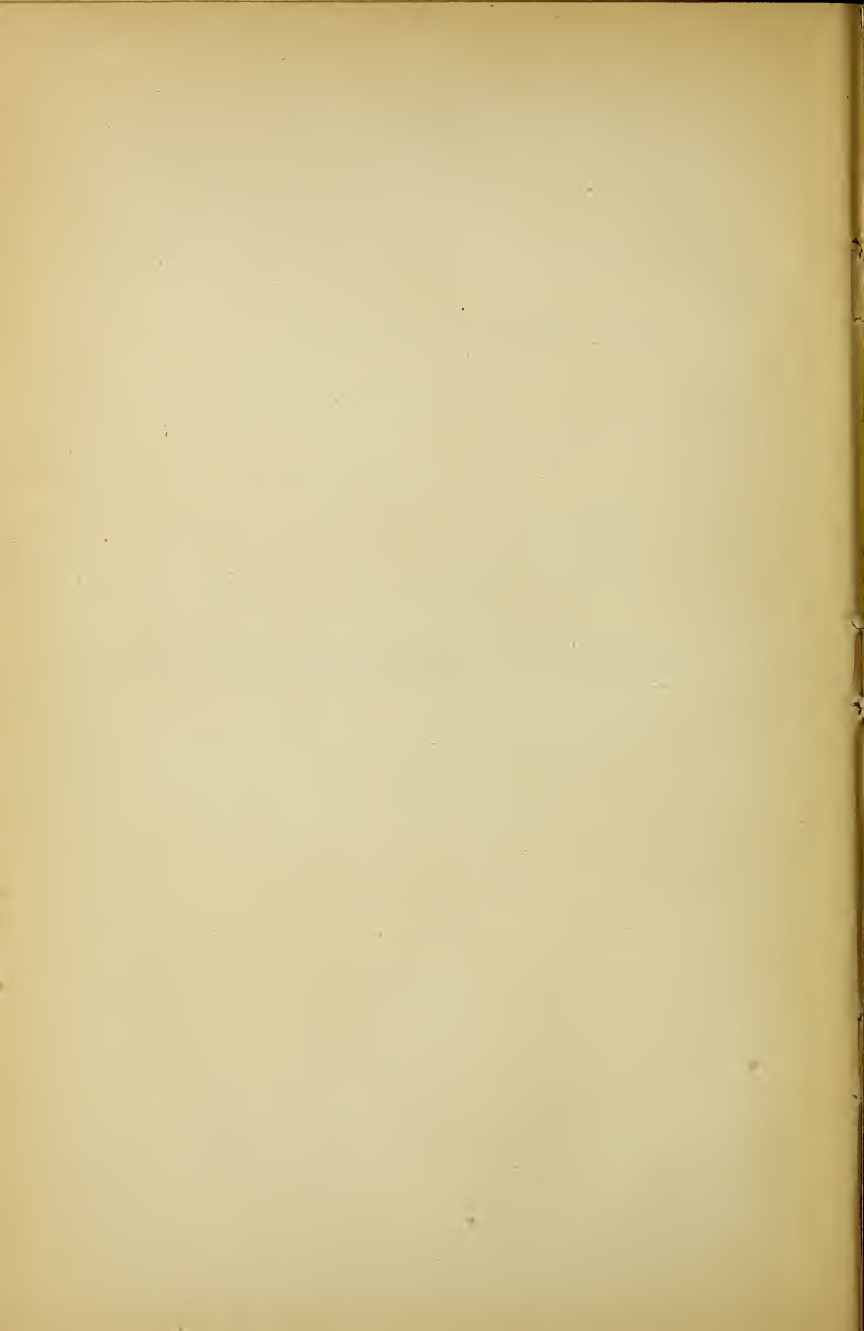
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HISTORICAL INTRODUCTION.



HISTORICAL INTRODUCTION.

It needs no close study of the history of the education of deaf-mutes to perceive that it naturally falls into two divisions, the first having its close and the second its beginning in the life and work of the Abbé de l'Épée. It is this position that constitutes his undoubted greatness as a benefactor to deaf-mutes, and as a teacher, though in the judgment of many he failed in adequately realizing his aims or recognizing the many imperfections inherent in the method he formulated. We may therefore regard each of these two periods in a double aspect. Previous to de l'Épée the possibility of instructing deaf-mutes was either merely a subject of speculative interest, or limited to instances of practical attempts in a favoured few whose circumstances enabled them to secure a competent teacher. Many of these attempts, as we shall show, were more or less successful, and it would be unjust not to give them the credit to which they are entitled. But the broad fact still remains, that they were not only of a sporadic character, but unproductive of any material advantage to deaf-mutes as a class. It was reserved for de l'Épée to render them all the signal service of placing the advantages of education within their reach, and by founding the first public school for them in Europe,

•

to give a vitality and continuity to the movement in their favour which it has never since lost. Again, previous to *de l'Épée*, the instruction of deaf-mutes had for its chief aim to give them speech, and there was no question either of its necessity or of the possibility of substituting any other mode of communication; for signs and the manual alphabet were regarded only as auxiliaries. *De l'Épée* was the first to develop and raise signs to the dignity of an independent language, which, in his opinion, if not equal, was at any rate sufficient to serve the same purpose to deaf-mutes as speech to those who hear. About the same time Samuel Heinicke in Germany was asserting the opposite principle—that as deaf-mutes could be taught to speak, and speech was manifestly superior to any other form of language as an instrument of thought and medium of intercourse, it should form the exclusive basis of their education. From this arose that long controversy over the merits of the two systems—the sign and the oral—which even now has not altogether ceased.

The teachers and writers belonging to our first period may be most conveniently grouped according to their nationality. Thus we have Ponce de Leon, Bonet, and Ramirez de Carrion in Spain; Bulwer, Wallis, Dalgarno, etc., in England; van Helmont and Amman in Holland; Pereira and his predecessors in France; and Kerger, Raphel, Lasius, etc., in Germany.

The Spanish group of teachers are undoubtedly first, not only in point of time, but also, having regard to the period, in the character and extent of their achievements, of which Bonet's treatise has come down to us

as the principal literary monument. Moreover, a special, though extrinsic, interest attaches to them from the fact that each had as his scholars members, in different generations, of one of the highest and most ancient families of their country, besides others as distinguished, a circumstance that is probably without parallel, and calculated to appeal strongly to the heart and imagination. Not that the troubles and difficulties of those in a humbler position would be any the less deserving of our attention and sympathy, could we know all; but the circumstances of the case before us, while they add nothing to its real importance, give it exceptional prominence, and have unquestionably aided in spreading abroad the knowledge of the subject.

Before giving an account of Ponce de Leon and his successors, it will be necessary to a proper appreciation of the value and significance of their work, briefly to review the condition of deaf-mutes, and the opinions held concerning them, before and during their time. This, however, is not easy; and it may at once be stated that of any direct evidence of their condition we have hardly a trace during the long stationary period between the intellectual activity of the ancient world and the new era inaugurated by the invention of printing and the revival of learning. But if we cannot adduce anything descriptive of their condition, we can to some extent infer what it was, first, from the general state of the times, and, next, from the teachings of those philosophers, physicians, divines, and jurists whose authority was regarded as paramount in all matters within their respective spheres.

It is not difficult to imagine what the state of deaf-

muteness during the middle ages must have been ; for it is unlikely that in an age when education had reached its lowest ebb, they would fare better than those in full possession of their senses. But when, in addition, we consider the strange combination of ignorance, gross superstition, and mystical fanaticism peculiar to this period, which went hand in hand with obsequious reverence for authority and horror of innovation, it could only have deepened the misery of a class that had nothing to hope from a spirit so inimical to the progressive discovery of truth by the light of reason and experiment. This spirit long survived the death of the body it once animated, and by force of established possession and prejudice delayed the progress of improvement. Illustrations of the peculiar temper of this period are found in the well-known incident of the so-called miraculous cure of dumbness related by the Venerable Bede, in which the historical critic with reason sees one of the earliest attempts to teach the dumb to speak ;¹ and in the sudden recovery of his speech by one born dumb, through the supernatural agency of some defunct saint, which is said to have occurred at Padua in 1243.² That master-mind of his time, Albertus Magnus, simply reaffirms Pliny's observation that those naturally deaf are also of necessity dumb. Deaf-mutes appear also to have been regarded as a proscribed class, Scripture itself being quoted in support of this unmerited obloquy.³

The authority of Aristotle was sovereign in natural

¹ See Arnold's *Manual for Teachers*, pp. 9-12.

² Ricobaldi, *Historia Imperatorum*.

³ Lasso, *Tratado legal sobre los mudos* (1550).

and metaphysical philosophy, and his influence had increased weight from his system being bound up with that of the Church. It can hardly be realized now, but may be compared to that of the Bible in religion and morals. We therefore find in the early accounts of deaf-mutes that the writers refer to his *dicta* on the questions raised by the attempts to instruct them, and this generally to their prejudice. The following are the passages of Aristotle usually referred to :—

"While different viviparous quadrupeds have a different voice, yet none of them has the faculty of speech, which is peculiar to man. For such as have the faculty of speech are also vocal, but not all such as are vocal have the faculty of speech. All such too as are deaf from birth are also dumb, and though they are vocal, yet are entirely destitute of speech" (*Hist. Animal.*, bk. iv., c. 9).

"Of the senses which are subservient to the necessities of life, the sight is more excellent and *per se*; but the hearing is more excellent incidentally with reference to the intellect. For sight announces . . . but the hearing only announces the differences of sound. But, incidentally, hearing greatly contributes to wisdom; for discourse, which is audible, is the cause of discipline (*i.e.* education), not essentially, but incidentally, for it is composed of names, and every name is a symbol. Hence among those who from their birth are deprived of each of these senses, the blind are more intelligent than deaf-mutes" (*Of Sense and Sensibles*, c. 1).

"Why, of the senses, is hearing from birth the most liable to injury? Is it because hearing and voice appear to originate from the same principle? But speech, which is a species of voice, appears to be rapidly corrupted, and to be perfected with the greatest difficulty, of which this is an indication, that after birth we are for a long time dumb. . . . For, at first, we do not at all speak, because speech may be easily corrupted, and there is a common principle both of hearing and speech (for a certain voice is also the principle of hearing), so that, as it were, incidentally and not essentially, the hearing is of all the senses the most easily injured (or corrupted)" (*Problems*, xi., 1).

A consideration of these passages with their context makes it clear that in the first Aristotle was merely stating an observed fact in natural history ; though it would appear from the last as if he did not sufficiently understand the relations of hearing and speech to perceive that dumbness was a purely accidental consequent of deafness. In the second, in speaking of hearing being the most efficient instrument of education, he is careful to explain that this was only by accident, since hearing is the sense of sound, and sound the vehicle of thought. But notwithstanding their guarded terms, these words were alleged as proving that deaf-mutes are incapable of learning speech or of intellectual instruction. One instance may be quoted. Ludovic Vives (sixteenth century), a Spaniard, and of such extensive knowledge as to stand high in the estimation of his European contemporaries, tells us that—

“After the knowledge of things was invented and the arts established, the sense of hearing teaches both more and greater things, and more quickly ; for we receive in the shortest time what has been prepared of old and handed down, nor has Aristotle undeservedly named this the sense of education ; living things deprived of it are not capable of education. Wherefore I the more wonder that there was one born deaf and dumb, who had learned letters, as R. Agricola, who has related this, believes” (*De Anima*, 1538).

It will afterwards be seen that Ponce de Leon and others understood Aristotle in the same sense. This use of him to the prejudice of deaf-mutes is probably a proof of the confusion into which the ideas of men on many subjects had fallen, which is well seen in the tractate of Lasso, Ponce de Leon’s friend and contem-

porary,—of which we shall speak more fully,—where, discussing these passages from Aristotle, he says,—

“In my opinion this is a great error of Aristotle and Pliny, who say that men, who from illness contracted in childhood have lost their hearing, become mute; because if this were so, we should hold as true the opinion of some philosophers who have held that speech is an artifice acquired and learned like other arts, and that when hearing is absent it could not be learned, and therefore men would remain dumb. This is false and erroneous, for speech is natural in man according to the common view of all philosophers; for if it were not, we should place men on an equality with beasts. . . . Speech is natural, not artificial. . . . The infirmity of deafness is not a sufficient cause, as Aristotle says, for men not to speak; but when the hearing is stopped, it happens that the subtile organized parts of the voice are also stopped, by which men remain dumb.”

The views of the Church were also adverse to the capacity of deaf-mutes for instruction. St. Augustine, whose authority was equally great in theology, says, “We fully admit how much (punishment) is due to our own sins; but when you also deny that we are liable for original sin, you must answer this: What merit is there in such great innocence when one is born blind or dumb? This defect also hinders faith itself, as the Apostle testifies, who says, ‘Therefore faith cometh by hearing.’”¹ That the Church held the dogmas of religion could only be taught in the inspired words of the Bible is sufficiently shown by the words of a commentator contemporary with Bonet, who, writing on the text cited by Augustine, says, “St. Augustine, speaking of deaf-mutes by birth, has well said that in them the defect of hearing hinders faith, because the deaf-mute by birth cannot learn the letters, by which he may understand

¹ *Contra Julianum Pelagianum*, bk. iii., 10.

the mysteries of the faith ; because the knowledge is given and received by hearing." ¹ So the publication of Bonet's treatise is approved of by the spiritual censor as likely to promote the spiritual welfare of deaf-mutes and enable them to take the Sacrament. ²

The canon law also held that a deaf-mute was incapable of celebrating the Mass, because it was considered necessary to pronounce the words of the consecration of the Eucharist, in order that the mystery of transubstantiation might take due effect. ³ Nevertheless, by a decree of Pope Innocent III. (twelfth century), deaf-mutes were not precluded from contracting marriage, if they had sufficient sense to show by signs that they understood what was intended by the ceremony ; this distinction arose from the latter being regarded as merely *pro forma* and the former *ex substantia*. ⁴

But it is in the opinions held by the physicians that we find the greatest obstacles to teaching deaf-mutes to speak. They generally held that there was a natural connection between the hearing and the organs of speech. A certain nerve was supposed to have branches, one of which spread into the ear and carried sounds there, and the other ran out to the tongue and larynx ; by reason of which the affections of the ear and tongue were easily communicated ; hence this sympathetic organic connection of the nerves of speech and hearing

¹ Estiò, *In Omnes d. Pauli Epist. Commentaria* (1614), cit. by Hervas y Panduro in *Escuela Española de Sordomudos* (1795).

² *Censura de Manuel Mola* ; affixed to Bonet's *Reduccion*, etc.

³ Lasso, *Tratado*, etc. ; and *Apostolic Canons*, 77.

⁴ The register of St. Martin's, Leicester, contains an entry of such a marriage that took place in the eighteenth year of Queen Elizabeth's reign, in which the signs used are described.

was considered the only cause why a man born deaf was also dumb. We have it on Bulwer's authority¹ that this was the opinion of Galen, the celebrated physician of the second century, who exercised an unbounded influence over medical science for at least fifteen hundred years. The meaning of this has only to be realized to understand the dire consequence it involved in the conclusion that deaf-mutes could not be taught to articulate, for in this view speech and hearing were necessarily inseparable. Most of the errors of medicine in those days were due to want of exact experimental knowledge; and, like all other departments, it suffered from that besetting sin of undue respect for authority in matters purely physical, which treated with contempt all induction proceeding by experience. Even Vesalius, the greatest anatomist of the sixteenth century, is said not to have known the osteology of the ear.

But deaf-mutes had been taught to speak before physicians would admit their mistakes; and instead of accepting, like Bulwer, the only explanation of such a phenomenon, viz. that the organs of speech and hearing had no natural connection, some attempted a compromise. Thus Paul Zacchia, a celebrated Italian medical jurist (1584—1659), maintains the old view; but, referring to Ponce de Leon's achievements, thinks that the difficulty of accounting for them can be explained by the reason advanced by one Fabritius—that a thick integument has grown in front of the tympanum, which, while it caused deafness, would not affect the organs of speech.²

¹ *Philocophus; or, The Deaf and Dumb Man's Friend* (1648), p. 89. I have been unable to consult Galen's works.

² *Quæstiones Medico-Legales* (1674), bk. ii., tit. i., quæst. 8.

The decisions of the jurists as to the rights of deaf-mutes were necessarily based as much on the current opinions held of their incapacity for instruction as on the observed facts of their condition of ignorance and neglect. Roman law regarded dumbness as a disease.¹ The provisions of the Institutes and Code of Justinian² in regard to them are well known. Sufficient for our purpose is it to know that the spirit of Roman law long survived the fall of the Empire, many of the laws relating to the more essential affairs of life, such as marriage, guardianship, conveyances, contracts, and wills, passing into popular usage and reappearing in the least mutilated form among such of the modern nations as were not entirely dominated by feudal institutions. Of these Spain is one. The important point in the Code that must be borne in mind, in considering this part of our subject, is the sharp distinction that was drawn between those born both deaf and dumb, and those who were both from subsequent calamity or illness, or were simply one or the other, from whatever cause. It was a distinction, taken in connection with the medical and popular views, of more profound significance than is now usually implied when we speak of congenital and semi-mutes.

From Lasso's treatise we learn that popular opinion regarded as being dumb by nature, *i.e.* essentially as well as congenitally, those from whom nature has taken away hearing, and with it speech, at the time when they would otherwise have given some proof of being

¹ Digests, bk. xxi., tit. 2, 9.

² Inst., bk. iii., tit. 20, 7; and Cod., bk. vi., tit. 22, 10. For a translation of the latter see Arnold's *Manual*, p. 7.

possessed of these faculties ; and as dumb *ex accidente* those who, after having spoken, cease to do so from calamity or illness. Hence it was considered absolutely impossible that the dumb by nature could ever speak or even write, and any deaf-mute who at any time attained to speak was reputed as having been dumb *ex accidente*. Mediæval law, following the cue of Roman law, was based on these facts, and the possibility of the dumb by nature speaking was not contemplated and determined on. The only concession made was, that if he could write, and by signs indicate that he understood what he wrote, he was at liberty to make a will, or perform legal conventions requiring the use of words. But signs that could be interpreted by such of his friends or relatives who, from constant intercourse, understood him, were received as valid evidence in a court of law. The law also regarded deaf-mutes as "infants," though of advanced age, the force of it lying in the fact of an infant having neither judgment nor ability to speak.

Lasso's own explanation of the "dumb by nature" actually having learned to speak is not a little curious. He points out that, according to Aristotle, nature is constantly aiming to produce all living creatures in their best and most perfect form ; and that therefore when any creature is born with some defect it is not through any fault of nature, but through the want of disposition in its natural constitution to respond to the efforts of nature. All are born speechless, because it is necessary in nature for the greater perfection of their speech ; hence, when there is a defect in the natural constitution, they remain dumb, nature being unable

to overcome or remedy the defect or infirmity; and according as this be in a greater or smaller quantity, is it sometimes born with the creature, and sometimes occurs after birth, when disease or calamity has supervened during the period it remains mute for its greater perfection. Therefore it is, in his view, not strictly correct to speak of any one being dumb *by nature*, the real cause being some constitutional defect or infirmity by which the natural instinct to speak was thwarted, and the creature prevented from taking advantage of the end for which his vocal organs were made. Hence he is, more properly speaking, dumb *ex accidente*, and that being so he is not precluded from afterwards acquiring speech by human art. Lasso entirely overlooks the loss of hearing as a possible cause of dumbness.

To the evidence we have brought forward we may add that of Molinæus, a French jurist of the early part of the sixteenth century, who held that "one born deaf and dumb is entirely undisciplinable—or unamenable to education."

It is tolerably clear, then, that it was considered impossible in fact as well as in legal theory that congenital deaf-mutes could by any means attain to speak. This proceeded from the idea that seems to have been held, perhaps more by intuition than reflection, that speech is a natural instinct in man. For untold generations men had been accustomed to make the first attempts at fixing and communicating their ideas by speech, and it was a natural prejudice to believe that sounds were the necessary instruments of thought and its expression. The essentially artificial nature of speech was not realized, and the possibility

of there being other avenues to the mind was either only dimly or not at all perceived. Even at the present time there are many who find it difficult to understand this. Writing also was looked upon as deriving its meaning and force from speech.¹ Language, thought, and speech, in short, were regarded, if not as absolutely inseparable, at any rate so for all practical purposes. Speech being the recognized medium of education, the absence of this faculty implied the exclusion of deaf-mutes from intellectual instruction. To be *dumb* was, in fact, considered synonymous with lack of reason, and in nearly all languages the word was so used. Hervas y Panduro gives an instructive list in illustration of this remarkable circumstance.²

But it may be asked whether no attempt was made to reach their minds by signs, the manual alphabet, or writing? This appears a perfectly natural inquiry when we consider that signs were used more or less in all ages; and in the time of the Roman Empire the art of signing was carried to great perfection by the *pantomimi*. Signs may be said to be as much a characteristic of man as speech, did not the latter by its inherent superiority always tend to subdue and even supplant them. We know that deaf-mutes have a natural tendency to use gestures, a characteristic which must have always existed; and we have already shown that the jurists admitted these as valid in certain circumstances, which of itself proves that in practice they

¹ Valles, in his *De Sacra Philosophia*, c. 3, refers to this, and tries to show that it is not so.

² *Escuela Española de Sordomudos*, vol. i., pp. 4, 5. Max Müller speaks highly of his philological researches.

were commonly used ; but there is no evidence, and indeed it is improbable, that they were developed or considered capable of serving any higher purpose than was demanded by the practical necessities of life. There is less uncertainty in regard to manual alphabets. The Greeks employed a system of numeration by the fingers which Bede has described ;¹ and as they also used the letters of the alphabet regularly in the notation of numbers, it would have been easy to form a manual alphabet, but there is no clear evidence that this was done. Bede himself, in the same work, gives directions how to form a "manual speech," a term that is highly suggestive of the idea of an intimate connection between sounds and the visible signs for them. Manual alphabets were also used by some of the monastic orders, notably the Cistercians, whose vows of silence compelled them to resort to some device for communicating with one another. Several works, too, were written explaining various systems of spelling by the hands, as also by posturing.² Now it is remarkable that these manual alphabets were designed and used for almost every purpose except that with which we to-day associate them. We look in vain in Bede's or any other treatise for any mention of their suitability for deaf-mutes. True, the evidence that this use for manual alphabets was unknown is only negative, and it is not unlikely they may have been so used ; but the

¹ *De Computo, etc.* ; see Arnold's *Manual*, pp. 12, 13.

² One was published at Venice in 1520 by John Romberch, but one of the best is Rossellius' *Thesaurus Artificiosæ Memorix* (1579). Bonet mentions another by John Baptista Porta, *De Furtivis Literarum*.

absence of all mention, in the works devoted to the subject, of the possibility of using them in the instruction of deaf-mutes is very significant, and throws further light on the impression we have derived from other sources of the ideas held regarding the relations of language and speech. Manual alphabets were evidently considered by their authors simply as interpreters of spoken thought.

This inability to make use of and develop these different modes of expression in furthering the education of deaf-mutes is undoubtedly to be attributed largely to ignorance of the psychological laws by which the order and objects of education under the different conditions of hearing, deafness, and other defects of the senses are determined and carried out, and which have to-day reduced it to a science. It may be affirmed that no regular course of instruction existed or was conceived that would render deaf-mutes capable of conceptual thought, and of expressing themselves in conceptual forms to a sufficient degree to share in the intellectual advantages which their possession implies.

But this is all that in strictness can be said on the point, for it would be a great mistake to imagine that deaf-mutes as a class were in a state so utterly benighted as the facts we have noticed would seem to imply. If their deprivation of hearing was fraught with consequences which went far beyond the mere loss of the sense, few of them were left without some signs of intelligence; and while a large number must from their circumstances have been sunk in a condition of barbarism and even idiocy, some more fortunate,

thanks to refined surroundings, kind relatives and friends, may have been enabled to acquire skill in expressing themselves by their store of natural signs, to exercise their observation and judgment in all ordinary matters, and participate, so far as was possible, in the pleasures of life. Indeed, we begin to meet with such instances after the invention of printing. We have only to refer to the deaf-mute spoken of by Rudolph Agricola;¹ those whom Cardan² tells us he knew; Sir Edward Gostwicke, to whom Bulwer dedicated his *Philocophus*; the cases Bulwer himself relates in that work of some who exhibited proficiency in the use of signs or writing, and dexterity of perception,—all of which would have been lost were there no record. Instances also of capacity for lip-reading are not uncommon.³ And even the Church, notwithstanding her dogmatic teaching, was not altogether blind to their claims on her charity, as is well illustrated by an incident in the life of St. Francis de Sales:—"About the year 1604 he took into his house a deaf-mute youth, whose good conduct and ingenuity, not less than his misfortune, had excited his interest and compassion, and succeeded with 'incredible labour' in teaching his *protégé* the doctrines of the Church, taught him to confess himself by signs, and admitted him to the Communion, which the youth never approached without a respect and devotion that

¹ *De Inventione Dialectica* (1538).

² *De Utilitate ex Adversis Capienda*, c. 7. First published in 1561.

³ Zwinger, *Physiologia Medica* (1610), c. 25; Borel, *Historiæ et Observationes Medico-Physicæ* (1676), cent. iv., 23; Bonifaccio, *L'Arte de' Cenni* (1616).

were highly edifying. He did not long survive the bishop, his death being caused by grief for the loss of so good a master."¹

But perhaps the most interesting and remarkable of these cases is that of Jean Fernandez Navarrete, commonly called *El Mudo*, the celebrated painter, who, as a countryman and contemporary of Ponce de Leon, deserves something more than a passing notice. Born at Logrono in 1526, he lost his hearing when three years old. His father sent him to the monastery of L'Etoile, of the Order of St. Jerome, near the town, where, his aptitude for drawing being perceived, he was taught the elements of painting. His parents were advised to send him to Italy to complete his education as an artist, whither accordingly he went and became a pupil of Titian, for whom he ever afterwards entertained great reverence, and whose style he adhered to so closely as to be called the "Spanish Titian." In 1568 he became painter to Philip II., and also undertook work for the monastery and church of the Escorial. He painted a large number of pictures, many of which are still among the sights of the Escorial. One of the most celebrated was that representing Abraham in the midst of the three angels, for which Philip paid what was then considered the large sum of five hundred ducats. We are told that he could explain himself very distinctly by signs, and that he read, wrote, played cards, and was well instructed in history and mythology. A characteristic anecdote is

¹ Cited from Marsollier's *Vie de S. Francis de Sales* (1826), vol. i., p. 394, in Piroux's *L'Ami des Sourds-Muets*, vol. iv.; and *American Annals of the Deaf*, vol. iii.

told of him, which may be taken as indicating that he was greater as an artist than a linguist.

"He proved the great opinion and respect which he entertained for the works of this great master (Titian) when his celebrated picture of the 'Lord's Supper' came to the Escorial: at the time of placing it in the dining-hall, the picture being found a little too large, the king ordered it to be cut to fit; the mute, who found himself by the king without an interpreter, understanding what it was his Majesty had just said, began to raise such cries and make signs of such extreme chagrin that he could not but hear. When the interpreter arrived, he explained to his Majesty Fernandez's proposal, which was that he engaged himself to deliver in six months an exact copy of this beautiful work, which would fit into the place intended for the original. The mute also gave the king expressly to understand that he was ready to have his head cut off if he did not keep his word. But by an inexplicable singularity, Philip, who had a great love for the fine arts, not desiring to be kept waiting another minute, had the picture cut; whereupon Fernandez could not contain his grief and anger."¹ He died at Toledo in 1579, and an epitaph written by Lope de Vega records that "Heaven denied me speech, that by my understanding I might greater feeling give to the things which I painted; and such great life did I give them with my skilful pencil, that, as I could not speak, I made them speak for me." Had Navarrete learned to speak as

¹ Quilliet, *Dictionnaire des Peintres Espagnols* (Paris, 1816). This anecdote is also related by Northcote in his *Life of Titian* (1830), vol. i.

well as he painted, it is not difficult to imagine that he might have been the most distinguished figure in our history.

Cases like those adduced can, however, only be regarded as exceptional; but as such they bring out into stronger relief the absence of all regular instruction from which till de l'Épée's time the class suffered.

Pedro Ponce de Leon is said to have been born at Valladolid in 1520.¹ He belonged to one of the most ancient families of the Peninsula—the house of Arcos. “So noble and ancient is this ancestry that in the first class of grandees of Spain there are few houses that do not boast of containing among their illustrious ancestors some bearing the name of Ponce de Leon.”² It furnished several men of note, amongst whom was a contemporary, the poet Luis Ponce de Leon. Hervas y Panduro, towards the end of the last century, dedicated his *Escuela de Sordomudos* to Don Joaquin Lorenzo Ponce de Leon, Marquis of Castromonte, as a descendant of the same family to which Pedro belonged. He studied and graduated at the then famous university of Salamanca, as this entry testifies: “In this forest of writers of Salamanca stand pre-eminent like noble cypresses . . . Pedro Ponce de Leon, who taught the dumb to speak.”³ He then became a monk in the

¹ According to the Abbé Martin, in Piroux's *L'Ami des Sourds-Muets*, vol. iv., p. 113, and confirmed by Señor Manuel Blasco, of Madrid.

² Piferrer, *Nobilario de los Reinos y Señores de España*, vol. i.

³ Davila and Ruiz, *Reseña histórica de la Universidad de Salamanca* (1849), p. 43.

Benedictine monastery of S. Benito at Sahagun in Leon, whence he afterwards went to that of S. Salvador at Oña, at no great distance from Burgos, where he appears to have passed the rest of his life.

What led to his taking up the teaching of speech to deaf-mutes—a task thought impossible—is not known, unless we are to credit the story that “one named Gaspard Burgos had been unable to enter a monastery as a convert, because he was a deaf-mute; that Ponce de Leon, having undertaken to instruct him, found the secret of making him speak so that the brother could confess himself, and it is also said that he became an adept in letters, and composed several works.”¹ Whether this be true or not, it would not be at all unlikely that, some such case having come under his notice, Ponce de Leon had the sagacity to discover the possibility of teaching his *protégé* to speak; and the necessity which the Church imposed of the truths of religion being taught in a literal form may also have acted as an incentive to the effort.

But his greatest success was with Francisco and Pedro de Velasco, members, like himself, of an equally ancient and noble family—that of the Duke of Frias, better known as Constable of Castile, and which in course of time ramified into numerous branches. This office of Constable was originally one of great

¹ Michaud's *Biographie Universelle*, art. “Bonet.” Degerando (*De l'Education des Sourds-Muets*, vol. i., p. 311) states that M. Nuñez de Taboada, a distinguished Spaniard resident at Paris, wrote the article on Ponce de Leon in the same work, and was intimate with the head of the monastery at Oña. If, as is very likely, the article on Bonet is from the same pen, the origin of the above story may be accounted for.

importance. Founded by King John I. of Castile in 1382, in imitation of a similar dignity in France, the holder of it, as indeed the title implied, was in constant attendance on the King, took his place when occasion required, and was captain-general of the army. The first holders were of royal birth; but when King Henry IV. bestowed the office on Pedro Hernandez de Velasco, Count of Haro, in 1473, it became and has since remained hereditary in this family. His son and successor, who had been created Duke of Frias, dying without issue, was succeeded by his brother Inigo Hernandez, the grandfather of Inigo Hernandez, Constable of Castile, and his brothers Francisco and Pedro, the pupils of Ponce de Leon. To understand the references which Lasso makes to them in his tractate, it is necessary to add that their father, Juan de Velasco, brother of Pedro Hernandez, the then Constable, was Marquis of Berlanga—probably by marriage. It would appear that Don Francisco was the eldest son; but it is known that he died when young, and his father evidently did not survive his brother the Constable; for when the latter died without issue, he was succeeded by Don Francisco's brother, Inigo Hernandez.

The MS. work by Lasso, to which we have already referred, appears to have been entirely overlooked by all the writers on the subject, doubtless from ignorance of its existence. It was written in the monastery at Oña, in October 1550, and its title sufficiently explains its object,—

“A Treatise newly composed by the licentiate Lasso, addressed to the most illustrious Señor Don Francisco de Tobar, legitimate

heir to the Marquisate of Berlanga and eldest son of the house of Tobar, in which under a new style and manner of speech is examined and founded on law, how one dumb by nature, excluded in the institution of some *mayorazgos* (right of primogeniture) wherein the dumb are excluded, is capable, should he speak, of the right of succeeding in the *mayorazgo*, as though he had never been dumb. Herein is examined the great novelty of speech, which the same Don Francisco, who was dumb by nature, now enjoys, and to whom this work is addressed; and how he is the first deaf-mute in the world who has spoken by the ingenuity of man. Some questions and historical matters and other admirable things which have occurred in the world are touched on, and the question of who is dumb by nature and who by accident is also discussed. Good heed is given to many doctors who have spoken on the subject, refuting the errors which jurists have held on this matter. It is a new and subtle work, as will appear by its perusal."

And the result of the invited perusal exhibits a work in as barbarous, redundant, and pedantic a style as any written at this period. Still it is of interest as the earliest in which we meet with any mention of Ponce de Leon and his work, and as possibly reflecting his own views on the matters discussed, for Lasso states that he wrote his account under the guidance of one more conversant with the subject than himself. We will now give such extracts as more particularly refer to Ponce de Leon. First, in regard to the circumstances that led to this work being written, Lasso says,—

"One of the chief reasons why, with all good-will, I was moved to quit the capital and come to this monastery of Oña, where at the present time you and the Señor Don Pedro your brother are residing, was to testify, as an eyewitness, to having seen this great novelty, which, on that very account, I could not believe unless with my eyes I should see what I held to be difficult and impossible in nature; and since it is a greater novelty and marvel

when seen, verified, and understood in your presence than when learnt only by hearsay and by what is said in your absence, I have judged it better to remain to write of it, than to hurry my departure for other personal affairs."

After referring to the great works of the past, and vaunting the art of teaching the dumb to speak as one which the genius of the sages of old never succeeded in achieving, he tells us that—

"Since the matter is so marvellous and unheard of, and so novel in its subtility, genius, and industry, as to seem miraculous, since it exceeds all the other (achievements) of these and all other philosophers past and present, it must not be imputed to audacity that I should venture to write what up to now no doctor has read of or touched on; for a novelty so unheard of, new, and miraculous does not admit of remaining unpublished. I have no wish to write or treat of the industry, solicitude, and ingenuity that are required to enable the dumb by nature to speak, because the sole inventor of this art has it engraved, and kept and reserved to himself; although he may publish it and make it manifest to all, on account of the great and universal benefit it would bring, if our father, Julius III., as his spiritual lord, and the sacred and Catholic Majesty of our invincible Cæsar, Charles V., as his temporal lord, command him; but I rather wish to record so novel and miraculous a fact as the born dumb having spoken, for it was held as impossible by the ancients."

"The great mystery, novelty, and miracle which has been seen in you and in Don Pedro de Tobar and Enrique his brother is not to be forgotten, nor is there any reason for not writing down, both what was due to supernatural agency and what to the master and artificer whom you had and still have, who by his industry, solicitude, and ingenuity has effected what nature has failed to do in others; because people daily see that men dumb by nature do not speak, and to say that men dumb by nature, like yourself and Don Pedro, speak, write, and confess, and that nothing is wanting of what nature endowed and perfected

Neither Lope de Haro, whose genealogical work is my chief authority, nor any other writer mentions this Don Enrique.

us with except hearing alone, is a novelty so great and unheard of . . . that I doubt how I can make it understood so as to be believed."

After explaining that the dumb son of King Cræsus (in the story related by Herodotus) recovered his speech through nature, under the excitement of the moment, having burst its bonds, Lasso attributes Don Francisco and Don Pedro's success to—

"the voluntary ingenuity of the reverend father Fray Pedro Ponce de Leon, an observant monk of the Benedictine order in the monastery of S. Salvador at Oña, your master, with whom I have oftentimes communicated and spoken on a novelty so new and miraculous, and never seen or read of till now; whose solicitude, diligence, and brightness, proceeding as they do from so great a genius and judgment, render supernatural in you and Don Pedro the cause of what happened to King Cræsus' son."

These extracts are long-winded and fulsome, but the following is of more interest from containing some personal details:—

"Neither philosophy nor astrology nor any science, however lofty, until the present day has had a part in being able to subdue, compel, and constrain nature to lay aside the degrading signs and marks brought by the infirmity, and which nature, when it took its side, had inflicted on men, taking away speech for lack of the master-mind of one, who solely by his skill and diligence should be able to make the dumb speak; and what I hold to be of more importance, that I can testify and swear to having seen. I have heard Don Pedro, your brother, singing the plain chaunt at a chorister's desk with a congregation of monks, keeping time and tune; not that he was able to follow the tune and order of what was sung in that monastery, because he was deprived by nature of hearing; but when Don Pedro commenced to sing according to the time and notes of the plain chaunt, the monks who were present and singing with him followed him, and assisted him to follow the tune and time, by which the music was kept in perfect order."

Well may Lasso add the fervent hope that—

“a man in whom there is so great judgment as in Pedro Ponce de Leon, your master, having solely by his ingenuity and skill made you and Don Pedro your brother speak, will by his knowledge, genius, and industry, and, what I consider more sure, by his good, pure life and religion, be able to subdue and force nature that was on the side of the disease, the enemy, so as to suffice by Divine grace, to make you hear fully and perfectly, as though you were not deaf, in the same manner as he has had a part in making you speak with all that clearness and perfection patent to all.”

He concludes this part of his work by referring to—

“the happily fortunate event which is hoped from you in the repose and joy of the Señora Marchioness, your mother, as also in the preservation and increase of your estate and marquise, as well as in other better and more estimable things,” etc.

The greater part of Lasso's tractate is devoted to arguing the question whether Don Francisco, being, as he calls it, dumb by nature, and therefore by law excluded from the right of the *mayorazgo*, could nevertheless claim it in virtue of having recovered his speech. Considerable ingenuity and legal subtlety are employed in proving, from eight different points of view, that, so far from still excluding him from his rights, his education had removed the cause by which the law has its reason and intent, and that therefore this law must be considered as *ipso facto* abrogated. This is followed by a discussion of various questions of a general character bearing on the same point.¹

But Ponce de Leon himself has left some particulars of his work. The Abbé Feyjoo y Montenegro, of the

¹ The extracts from Lasso are from a copy of the original MS. A summary of its contents will be found in *Ensayo de Una Biblioteca Española de Libros Raros y Curiosos*, by Don B. J. Gallardo, vol. iii. This and vol. iv. have only just been published.

Benedictine Monastery of St. Vincent at Oviedo, a critic of extensive knowledge, who flourished in the first part of the eighteenth century, published a series of letters on miscellaneous subjects. Amongst them is one on the invention of the art of teaching the dumb to speak, in which the claims of Ponce de Leon and Bonet to that honour are discussed. To this he afterwards added some further information, which by the influence of the General of his Order he had succeeded in obtaining from Oña.¹ The first piece is contained in a legal document dated August 24th, 1578, which, after narrating how Ponce de Leon instituted with the necessary legal formalities the foundation of a chapel with certain masses under certain conditions, proceeds to give the reasons :—

“These said moneys I, the above-mentioned Fray Pedro Ponce de Leon, monk of this house of Oña, have acquired by curtailing my expenditure, and by gifts of noblemen, and presents and legacies of gentlemen, whose executors I have been, and payments by pupils whom I have taught; whom by the perseverance with which God has blessed me in this holy house through the merits of our lord John the Baptist, and of St. Inigo, I have had for my pupils, who were deaf and dumb from birth, sons of great lords and of notable people, whom I have taught to speak, read, write, and reckon; to pray, to assist at the Mass, to know the doctrines of Christianity, and to know how to confess themselves by speech; some of them also to learn Latin, and some both Latin and Greek, and to understand the Italian language; and one was ordained, and held office and emolument in the Church, and performed the service of the Canonic Hours; and he also, and some others, arrived at a knowledge of natural philosophy and astrology; and another succeeded to an estate and marquise, and entered the army, and in addition to his other attainments, as has been related,

¹ Feyjoo y Montenegro, *Cartas Eruditas y Curiosas* (1765), vol. iv., carta 7.

was skilled in the use of all kinds of arms, and was especially an excellent rider. And besides all this, some were great historians of Spanish and foreign history; and, above all, they were versed in the Doctrine, Politics, and Discipline from which Aristotle excluded them."

Ponce de Leon also drew up another deed, in which, after enumerating the possessions of which he makes disposition with the necessary formalities, he states that they were given to him by the Marquis of Berlanga, and Don Pedro de Velasco, his son, and other noblemen and gentlemen, for the reasons expressed in the former document, and piously adds that "the industry with which God has been pleased to endow me in this house was through the merits of our lord St. John the Baptist, and our father St. Inigo."

There is a manuscript, still extant, written by order of the "Venerable Brother Pedro Ponce de Leon of glorious memory," and Feyjoo mentions that it was a tradition in the monastery that Ponce de Leon was a man of most exemplary life, and that the monks spoke of him in the same terms as those just quoted. This must be taken for what it is worth; and that it should be necessary to speak of him in so marked a manner need, perhaps, occasion no surprise, when the general condition of the religious orders of the time as we know it from history is taken into account.

Besides Lasso, a few of Ponce de Leon's contemporaries have also left brief notices of him in their works. Ambrosio de Morales, historiographer to King Philip II., in describing some of the remarkable men and things of his country, says:¹—

¹ *Las Antiquedades de las Ciudades de la España*. Sect. *Descripcion de España*, p. 38 (Alcala de Henares, 1575).

"The other illustrious Spaniard of marvellous skill and of an industry that would be incredible, had we not witnessed it, is he who has taught the dumb to speak, by a perfect method, invented by himself. This is the father Pedro Ponce, a monk of the Order of St. Benedict, who has taught two brothers and a sister of the Constable, who were dumb, to speak; and at the present time he is doing the same service for a son of the Chief Justice of Aragon. And what renders the wonder still greater, they remain in the most profound deafness, which was the original cause of their inability to speak. Thus they are spoken to by signs or writing, and they reply by speech, and they also write a letter or any other composition quite correctly. One of the brothers of the Constable was called Don Pedro de Velasco,—God be gracious to him,—who lived little more than twenty years, and it is marvellous what he learned in that time; for, in addition to Spanish, he spoke and wrote Latin almost without a fault, and at times elegantly; he also wrote in Greek characters. That this marvel may be better appreciated, and something known and remembered of the method which was followed with him, I will subjoin a writing from his own hand which I possess. Some one had asked Father Pedro Ponce in his presence how he had begun to teach him to speak. He repeated this question to Don Pedro, who replied first by speech, and afterwards wrote what he said as follows: 'Your Grace knows that when I was a child I knew nothing, like a stone (*ut lapis*); but I commenced to learn by first of all writing down the things which my master taught me; and afterwards I wrote down all the Spanish vowels in a book of mine which I had for the purpose. Then next, by the aid of God, I began to spell, and afterwards to pronounce with all the force I could, although much saliva came from me. After this I began to read histories, so that in ten years I had read the histories of the whole of the world; and then I learnt Latin. And this was all through the great mercy of God, without which no dumb person could accomplish this.' I call all scholars to witness how much Pliny would have boasted and exulted, without knowing how fitly to celebrate it, if it had been a Roman who had undertaken such a thing, and carried it out as successfully. It is truly so unique, wonderful, and well established, that it deserves to be held in the highest esteem."

We have next the testimony of Francisco Valles de

Covarrubias, physician to Philip II., who wrote a work on the philosophy of the Bible with special reference to the light it throws on physical facts. He shows that while speech may be said to be natural to men, since nature from the formation of the tongue has destined it to this use, nevertheless, from the different forms it takes in the languages of the world, it has to be acquired by use and instruction; that there is no more potent or facile instrument for the expression of thought; that writing must of necessity have come into existence after speech; then proceeds: ¹—

“Writing has the same relation to sounds that these have to the facts they represent; but that speech should be learned before writing, and that therefore writing derives its meaning through sound rather than sound through writing has no natural necessity, nor can it otherwise be so. But it happens to have this order on account of its facility, as, unless they are deprived too soon of any of the senses, men are more disposed to speak than to write. Still a different order is possible, as Pedro Ponce, a monk of St. Benedict, and my friend, has proved, who (wonderful thing) taught the born deaf to speak by no other device but that of teaching them first to write, pointing out by the finger the things to which the written characters correspond, and then pronouncing them. And thus as we begin by speech with those who hear, so do we as well by writing with those whose ears are closed. Hence neither order has any natural necessity; but it appears from the nature of the case that the procedure of speech and writing, besides the greater facility of speech, is the same in all using them. But those deprived of hearing can have writing in place of speech, in addition to which they can have a knowledge of Divine things by the sense of sight, as others have by hearing, which I have witnessed in my friend’s pupils.”

Lastly, we will adduce the testimony of Juan de

¹ *De Sacra Philosophia* (Lugd. Batav., 1595), chap. iii. (capite secundo Geneseos), p. 56. First published at Turin, 1587.

Castañiza, a monk of the same monastery at Oña, general of the Order of St. Benedict in Spain, and chaplain to Philip II., who wrote a life of St. Benedict, in which occurs the following passage¹ :—

“ Pedro Ponce, professed monk of Sahagun, by industry taught the dumb to speak, although the great philosopher Aristotle says that it is impossible ; and he has discovered by true philosophy its possibility, and the reasons of it, and left it well established in a book he has written about it ; and, what is more admirable, is that, those who are not able humanly to hear, he makes to hear, to speak and learn the Latin language with others besides, to write and paint and other things, as Don Gaspar de Guerra, son of the Governor of Aragon, his pupil, and some others well attest.”

The subject of the instruction of deaf-mutes seems not to have escaped the notice of Cervantes himself, the author, we need hardly say, of *Don Quixote*. In a rare and scarcely known little tale, entitled *El Licenciado Vidriera*²—otherwise Sancho Tocho, grandson of Sancho Panza—he tell us that “at this time there came to Valladolid a monk of the Order of St. Jerome, who lived in a monastery a few leagues distant. This good monk from his youth devoted himself to the education of deaf-mutes, whom he had succeeded in some manner in making to hear and speak.” Guyot³ appears to think that Ponce de Leon is referred to here, but this opinion is not warranted by the facts we have

¹ *Vida de St. Benito* (Salamanca, 1583, or 1588), cited by Hervas y Panduro in *Escuela de Sordomudos*, vol. i., p. 301. Castañiza died in 1598.

² *Novelas Exemplares* (Brussels, 1614). A French translation of this tale was published by the *Société des Gens des Lettres* in its organ *Babel*, vol. i. (1840).

³ *Liste Littéraire Philocophe* (1842), p. 487.

cited. It may, however, well be that Cervantes has veiled under fictitious terms what he may have known of Ponce de Leon.

In reviewing the whole of the evidence before us, we gain the impression that Ponce de Leon was a man who, contending with the prejudices and errors of his time regarding deaf-mutes, appears to have done no inconsiderable amount of work during his life; for we learn that, besides the Velascos, he taught a large number of other pupils. But had we only his own account, we might well doubt the startling results he tells us he obtained with his scholars, for admittedly they greatly exceed anything we can point to in our day. Considerable allowance must be made in the case of one who, having achieved what had hitherto been held to be impossible, was naturally desirous of making the most of it. An exuberant imagination and Castilian boastfulness have produced a picture full of brilliant effects. But it agrees in the main with the independent testimony of the various eye-witnesses which we have quoted; and when all due qualifications have been made on account of their inflated style, and the facts sifted and shorn of some of their gilding, the results are sufficiently remarkable to excite our interest and respect, and sustain Ponce de Leon's claim to be regarded as the first to create a method which rendered speech of practical value to deaf-mutes, and so upset the theories which had long prevented its application. It is likely that Ponce de Leon was largely indebted to the exceptional ability of his pupil Don Pedro de Velasco, of whom the genealogist Lope de Haro has recorded that he "was dumb from birth, and, possessed

of great talent, lived until the year 1571," a date which, considering that Lasso wrote his treatise in 1550, cannot well be reconciled with Morales' statement that he lived only twenty years; but Lope de Haro may have been mistaken. He also mentions *two* sisters of Don Pedro, deaf-mutes from birth, who became nuns.

It seems tolerably clear from Valles and Don Pedro's note that Ponce de Leon's method consisted in first teaching to write the names of objects, then articulation, followed by the association of the written words with their spoken forms. Writing thus had a prominent place. Lip-reading does not appear to have had any attention as a regular accomplishment, its place being taken by signs; and the difficulty Don Pedro implies he experienced in articulating, unless it was due to some constitutional defect, seems also to indicate that his master did not proceed in a very scientific manner in teaching articulation. There is no distinct trace of the use of a manual alphabet, but Lasso's allusion to engravings may point to one having been used.

Among the minor questions discussed by Lasso is one which raises the objection, that unless one dumb by nature speaks perfectly, so as to be well understood of all, the law in regard to the *mayorazgo* was not fully complied with. Lasso contends that even though his speech be not perfect, still if it was sufficiently clear to be significative, he was fit and capable of exercising his rights: an argument he clinches by adducing the fact that many even of those who hear speak very indistinctly. It is therefore to be presumed that Ponce de Leon's pupils were not so absolutely perfect in their

speech as the accounts would lead us to believe, though the question may have referred more particularly to Don Francisco de Velasco, as the heir to his father's estates.

There can scarcely be any doubt, from the influential position of the Constable and those who witnessed Ponce de Leon's triumphs, that they were well known ; and we may hazard the conjecture, which derives some support from his own statements, that there was hardly a deaf-mute in good circumstances in Spain who was not at some time under his tuition. The country was then at its political and material zenith, a condition which, as Walther¹ observes, usually gives intellectual efforts a more practical form. Jerome Cardan, too, who, though now forgotten, had a great reputation in his time as a physician and author, was disseminating by means of his works, which had an extensive circulation and were very popular, those views as to the possibility of instructing deaf-mutes which Ponce de Leon and his successors put to an actual test.²

Ponce de Leon certainly left some written account of his method. On this both Lasso and Castañiza leave us in no doubt ; but he evidently did not intend to publish it, for reasons not difficult to divine ; and Antonio Perez, in an approving notice appended to Bonet's work, states that Ponce de Leon "never undertook to teach it (his method) to any other." Hervás y Panduro thinks, however, that Perez is in error, and that Ponce de Leon made use of his book to initiate others into the art ; but there are no facts to support this opinion.

¹ *Geschichte des Taubstummen-Bildungswesens* (1882).

² See *Life* by Henry Morley, and Arnold's *Manual*, pp. 14-16
Cardan flourished 1501-76.

What ultimately became of this MS. work we cannot tell. It was supposed to have remained in the monastery at Oña. Baron Degerando¹ says that, through the influence of his friend M. Nuñez de Taboada, a search had been made there, but without result; and M. Ramon de la Sagra, another distinguished Spaniard, who devoted himself to philanthropical work, tells us that "Don Bartholome Gallardo, now a deputy to the Cortes and also its librarian, distributed at its session of the 19th January last (1839) a circular, containing the titles of various precious Spanish works. Amongst others appears that of Pedro Ponce de Leon, of whom we have just spoken."² This discovery was announced by Carton in his monthly journal *Le Sourd-Muet*, vol. ii., with the addition that a copy had been promised to Degerando. But this, however it originated, was a mistake. There is a possible explanation. Gallardo subsequently published a catalogue, doubtless containing what was included in the circular referred to, which on examination shows how it may have occurred; for under the heading of *Ponce de Leon*³ we have this, "*Notices of the art which he wrote [sic] in order to teach the dumb to speak,*" and the reader is referred to the MS. work of Lasso, from which we have quoted. The question seems to be finally set at rest by a letter addressed by the Spanish authorities to Prof. J. C. Gordon, of the National Deaf-Mute College, Washington, informing him that careful search had been made for

¹ *De l'Education des Sourds-Muets*, vol. i., p. 311.

² *Voyage en Hollande et en Belgique* (1839), vol. i., p. 152.

³ *Indice de Manuscritos in Ensayo, etc.* (as above), vol. ii. Vols. i. and ii. were published in 1866.

Ponce de Leon's work, but without result, and that it was doubtless destroyed by a fire which consumed the archives of the monastery.

Ponce de Leon died in 1584, as the following entry in the register of his monastery—translated from the Latin—informs us:—

“ Slept in the Lord, Brother Pedro Ponce, benefactor of this house, who amongst other virtues, which he possessed in a high degree, excelled chiefly in this, which is held in the greatest estimation by the whole world, to wit, teaching the dumb to speak. He died in the month of August 1584.”

It was not till 1620, thirty-six years after the death of Ponce de Leon, that Bonet's *Reduccion de las Letras, etc.*, appeared. Of Juan Pablo Bonet we know little more than that he was born in the town of Jaca in Aragon, in the latter part of the sixteenth century.¹ His “illustrious” family was still living there at the beginning of the present century. The title-page to his treatise shows the various positions he filled in the service of the King and the great officers of State, and he informs us that he served his Majesty in various commissions in France, Savoy, Italy, and Barbary; he must therefore have been a man of considerable parts and knowledge of the world, and also a man of letters, as his work and certain poems he is said to have written² prove. Meagre as these details are, they suffice to mark him as in many respects a complete contrast to his predecessor. What the circumstances

¹ Latassa y Ortin, *Biblioteca Nueva de los Escritores Aragoneses* (Pamplona, 1799), vol. ii., pp. 252-6.

² *Ibid.*

and motives were that led him to write the work we are briefly told in the preface. Bernardino Hernandez de Velasco, Constable of Castile, to whom he was secretary, was the grandson of Inigo Hernandez, and consequently great-nephew of Don Francisco and Don Pedro de Velasco. His younger brother, Luis, who became a deaf-mute at the age of two, was the first Marquis of Fresno (or Frexno), and died in 1664. "He was endowed with that title by King Philip IV. in 1628; they call him *Mute*, since he was naturally destitute of the faculty of speech, which nevertheless the art of Ramirez de Carrion succeeded in restoring, who taught him to speak and express his thoughts."¹

As this allusion to Carrion raises the whole question of his and Bonet's claims to the honour of having instructed this young nobleman, we must here take it up. Manuel Ramirez de Carrion, a contemporary of Bonet, was the tutor and secretary of Alfonso Fernandez de Cordova and Figueroa, Marquis of Priego, who was also a deaf-mute. He wrote a work published in 1629, describing two thousand secrets of nature, collected from various sources and arranged in the form of aphorisms.² To this is appended an address to the reader which contains matter pertinent to our subject. After descanting on the wonders of art and science, he asks,—

"And why should we not count among the greatest, although

¹ Bern. Justin., *Historia di Spagna*, cit. by Imhof in *Genealogia Vigineti Illustrium in Hispania Familiarum* (1712).

² *Maravillas de Naturaleza, en que se contienen dos mil secretos de cosas naturales*, etc. (Cordova and Montilla, 1629.)

it refer to a commonplace matter, the art of teaching the dumb to read, write, and talk aloud, whether they have been born deaf or have lost their hearing in infancy? This is an invention which I hold in high estimation, and for which I have sufficient and trustworthy examples; the first being the Marquis of Priego, my lord, who, had not his education been cut short as he grew older, would have spoken with great perfection, as he had begun to do at its commencement. But with the knowledge his Excellency had of reading and writing, aided by his great intellectual power, he governed his estates in such a manner as to earn for himself the name of a Christian and prudent prince. The second and more complete example is that of the Marquis of Frexno, Don Luis de Velasco, brother of the Constable of Castile, with whose education I was occupied for four years; and though broken by such long intervals, that it hardly left three full years, I taught him to read, write, speak, and converse with such success, that he felt no other deficiency than that of hearing; as he himself testified, having often been in the habit of saying, 'I am not dumb, but deaf.' Don Juan Alonso de Medina, son of Juan Antonio de Medina . . . was born without any impediment in his hearing and speech, and was capable of many things, but when eighteen months old he fell from a desk at which he was seated, and, striking his head on the ground, became totally deaf, and forgot in a few days all that he could previously speak, as if he were born dumb. Don Antonio . . . and Benavides, Knight of the Order of Alcantara, a resident in Madrid, when five years old, and hearing very well and speaking as well as could be expected at that age, had a severe illness, followed by total deafness, and in a few months lost what speech he had, nothing remaining but the inarticulate sounds which we hear in deaf-mutes; this defect I remedied in these two by instruction, and they speak to-day in a way which every one understands. I omit to bring in evidence others whose education, some from death, some from removal, was not completed, but they still remain clear proofs of the truth of the method followed. But I cannot pass over in silence another invention of my own, which I hold no less valuable—that of having reduced the method of teaching to read to a plan so easy and in the end so short, that a child can learn to read in fifteen days or a month at the least, with a finish and perfection which would have required two years by the

method commonly used in schools. I will give an example—and I could adduce many—of this which is sufficiently striking. I taught the Constable of Castile, who still lives, when six years old, at Madrid to read in thirteen days with such accuracy, that he had no need of any other master except practice to enable him to read more rapidly. This was confirmed by his Excellency, our Lord the King, on one occasion when his Majesty desired to hear the Marquis of Frexno read and speak. I was present when both inventions were substantiated, and their author honoured in the presence of so great a monarch. This incident seems to be not out of place here; but if it were, it would not trouble you to hear an answer given to his Majesty by the Constable, worthy of being written in marble or bronze and immortalized. It happened thus: the first day I commenced to give lessons to the Marquis of Frexno, who was then less than eight years old, he refused to be left alone with me, and asked his brother the Constable to share the lesson with him. He did so; but before commencing I asked the Constable to give his word of honour as a knight not to reveal to any one the secret of this method of teaching; his Excellency promised, and so well did he keep his promise, that one day, when his Highness asked him if his brother could speak yet, he replied that he could. ‘And who has taught him?’ He gave the name of the master. ‘Had he seen the lesson?’ ‘Yes.’ Then being further asked how he was taught, he firmly replied, ‘Your Highness will forgive me, that I cannot tell, because I gave my word to the master not to reveal the secret.’ His Highness approved and praised so discreet an answer, and the Count of Medellin, who was present, said, ‘Sire, he who knows so well how to keep a secret and to fulfil his promise while a child, will know better how to keep those which your Majesty entrusts to him when he is older.’ The Constable was then less than nine years old.”

Though written in a rather egotistic vein, there is no reason to doubt the main facts of this account, which are confirmed by the evidence of one who was personally acquainted with Carrion. Ezechiele di Castro was a Jewish physician of Avignon, who lived in Italy. He wrote a medical tractate, in which, after

describing some of the causes of deafness and dumbness,¹ he tells us that—

“The manner in which they can be remedied is wonderful, but not impossible of discovery by human genius. Numerous examples are found in Spain of children—deaf from birth, or from an accident causing extraordinary decay, or from the violent jolting of a vehicle, or from some unexpected and loud noise, as the firing of a cannon, which may all cause a child to be mute—who still speak with a clear voice, though remaining deaf, but not dumb. A son of the Most Serene Prince Thomas of Savoy, the Marquis of Priego, and the Marquis of Frexno, brother of the Constable of Castile, who were dumb, now speak without difficulty or hesitation, and their only known defect is deafness; and there are many other instances of private persons who have received this singular benefit from the ability of Manuel Ramirez de Carrion. I have learned this rare secret partly by conversation with the inventor himself, and partly by cogitating with extraordinary perseverance, and I also succeeded; but I will not reveal it here, but make a separate discourse on it in my concluding prelections.”

It has generally been assumed, from a passage in the prologue to his treatise, that Bonet was the tutor of Luis de Velasco. The only other proof that can be adduced is Sir Kenelm Digby's account (to which we shall presently come), and even then only by inference. Though Bonet hints at having taught several deaf-mutes, he nowhere claims to have been the sole tutor of this nobleman. Indeed, as a man of affairs in the service of the

¹ *Il Colostro Discorso Aggiunto alla Ricoglitrice di Scipion Mercurio. Dal Dottore Ezechiele di Castro, Medico Fisico Avinionesse* (Verona, 1642), pp. 17, 18. All the writers who refer to the above extract, without exception, attribute it to one Pierre de Castro, an Italian physician, in the service of the Duke of Mantua, and who died in 1663. This is all the more inexplicable, as I find the two men are distinct from each other.

King and the Constable, he probably would have little time to devote to a work requiring continuous attention. Hervas y Panduro's statement that when Bonet died in 1629 Carrion continued the instruction of Don Luis cannot be correct, since Carrion published his account that very year. Besides, according to Nicolas Antonio, Juan Hernandez de Velasco, the father of Luis, died in 1613, leaving his elder son Bernardino a boy ; and he, as we have seen, was about a year older than Luis, who must therefore have been at least twenty-five years of age in 1629. A possible explanation of the case is this : if Bonet did not himself train Carrion, he probably became acquainted with him as the tutor of the Marquis of Priego ; and in either case may then have engaged him to instruct Don Luis, while he would himself not only be interested, but also assist in the work, and ultimately describe in his treatise the method pursued. Carrion's remark that he was occupied with Don Luis only three out of the four years of his course of instruction may possibly indicate the extent of Bonet's share in it. The only alternative is to suppose a longer period in which the one began and the other completed Don Luis' education. It is remarkable that Bonet and Carrion do not allude to each other, nor does it seem creditable to them that each claims the merit of having invented a new method of learning to read, the principle of which was also applicable in teaching deaf-mutes to speak. Nor do they make the remotest allusion to the work of their predecessor, Ponce de Leon.

In the extract from Castro's tractate mention is made of a son of Prince Thomas of Savoy—Prince of Carignan,

a dependency of Piedmont, one of the states of Savoy. This was Emmanuel Philibert-Amedée,¹ who was born in 1628 and died in 1709. There has been considerable confusion in regard to him and who really was his tutor. Castro's statement, which was published when this young prince was only fourteen or fifteen, is, however, sufficient evidence of Carrion's claim in this respect, and it is confirmed by Morhof,² and by the celebrated Duc de Saint-Simon,³ who in 1722 was ambassador at the Court of Madrid. He gives the year 1638 as the date about which Emmanuel Philibert was under Carrion's tuition, and this is supported by historical circumstances. Prince Thomas was related to the Spanish royal family through his mother the Infanta, and was general of the Spanish troops from 1635 to 1640, so that it is not difficult to suppose that he had opportunities of hearing of a man—Bonet being dead—whose previous reputation pointed him out as the likeliest teacher for his son. Saint-Simon, in an earlier part of his memoirs, some dozen years back, mentions Prince Emmanuel's death, and speaks in unmeasured terms of Carrion's character as a teacher, probably misapprehending the true nature of his work. He then gives some interesting particulars of the prince: "He (Carrion) was so successful, that he enabled him, as it were, to hear entirely by the

¹ Guichenon, *Histoire Généalogique de la Royale Maison de Savoye* (1660).

² *Polyhistor Literarius* (3rd edit., 1732), vol. i., p. 719. Morhof flourished 1639-91.

³ M. Denis, *L'Instituteur du Prince de Carignan* in *Revue Française de l'Education des Sourds-Muets* (December 1887).

movement of his lips and by certain signs, understanding everything, reading, writing, and also speaking, though with some difficulty. He afterwards, profiting by the severe lessons which he had received, applied himself with so much spirit and sagacity, that he obtained a knowledge of several languages and sciences, and especially of history. He became so good a politician, as to be often consulted on affairs of State, and at Turin he was esteemed more from his capacity than his birth and rank. There he held his little court, and maintained it with dignity all his long life, which might pass for a wonder."

We must now turn to one of the most interesting incidents in Luis de Velasco's history—the visit of our King Charles I., when Prince of Wales, to Spain, to seek the hand of the Infanta in marriage, in which, as we all know, he failed. Charles left England with a well-appointed suite, including Sir Richard Wynne, of Gwydir, who was doubtless one of the Welshmen mentioned by Digby, and arrived at Madrid in the spring of 1623. Sir John Digby, afterwards Earl of Bristol, was then English ambassador there, and he had invited a kinsman of his, Kenelm Digby, to visit him, which he did, arriving shortly before Charles. Digby, who was a son of Sir Everard, of Gunpowder Plot fame, was then in his twentieth year, had already travelled a good deal, and gave promise of that versatility of character and talent which afterwards made him so famous in the many parts he played as courtier, author, diplomatist, and naval commander, a proof of which he gave in making himself so agreeable to Charles as to be admitted into his suite. He returned with him to England,

when he was knighted by King James. During his stay at Madrid, he made the acquaintance of Luis de Velasco and his instructor, in whom both Charles and he showed great interest. About twenty years after this visit, Sir Kenelm published one of his best-known works. There is a chapter on the sense of hearing, in which he refers to Don Luis as illustrating how one sense may supply the want of another. We must let him speak in his own quaint style :¹—

“ But this is not the relation I intended, when I mentioned one that could hear by his eyes (if that expression may be permitted me); I then reflected upon a nobleman of great quality that I knew in Spain, the younger brother of the Constable of Castile. But the reflection of his seeing of words, called into my remembrance the other that felt light: in whom I have often remarked so many strange passages, with amazement and delight; that I have adventured upon the reader's patience to record some of them, conceiving they may be of some use in our course of doctrine. But the Spanish lord was born deaf; so deaf, that if a gun were shot off close by his ear, he could not hear it: and consequently, he was dumb; for not being able to hear the sound of words, he could neither imitate nor understand them. The loveliness of his face and especially the exceeding life and spiritfulness of his eyes, and the comeliness of his person and whole composure of his body throughout, were pregnant signs of a well-tempered mind within. And therefore all that knew him, lamented much the want of means to cultivate it, and to imbue it with the notions which it seemed to be capable of in regard of itself; had it not been so crossed by this unhappy accident. Which to remedy physicians and chirurgeons had long employed their skill; but all in vain. At the last, there was a priest who undertook the teaching him to understand others when they spoke, and to speak himself that others might understand him. What at the first he was laughed at for; made

¹ *Treatise on the Nature of Bodies* (Paris, 1644), pp. 254-6. Republished in London 1658, and at Frankfort 1664.

him after some years be looked upon as if he had wrought a miracle. In a word ; after strange patience, constancy, and pains, he brought the young lord to speak as distinctly as any man whosoever ; and to understand so perfectly what others said that he would not lose a word in a whole day's conversation.

" They who have a curiosity to see by what steps the master proceeded in teaching him, may satisfy it by a book which he himself hath written in Spanish upon that subject, to instruct others how to teach deaf and dumb persons to speak. Which when he shall have looked heedfully over, and shall have considered what a great distance there is between the simplicity and nakedness of his first principles ; and the strange readiness and vast extent of speech resulting in process of time out of them ; he will forbear pronouncing an impossibility in their pedigree, while he wondereth at the numerous effects resulting in bodies out of rarity and density, ingeniously mingled together by an all-knowing Architect, for the production of various qualities among mixtes [*sic*], of strange motions in particular bodies, and of admirable operations of life and sense among vegetables and animals. All which, are so many several words of the mystical language, which the great master hath taught his otherwise dumb scholars (the creatures) to proclaim his infinite art, wisdom, perfections, and excellency in.

" The priest who, by his book and art, occasioned this discourse, I am told is still alive, and in the service of the Prince of Carignan, where he continueth (with some that have need of his pains) the same employment as he did with the Constable's brother : with whom I have often discoursed, while I waited upon the Prince of Wales (now our gracious Sovereign) in Spain. And I doubt not but his Majesty remembereth all I have said of him and much more : for his Majesty was very curious to observe and enquire into the utmost of it. It is true, one great misbecomingness he was apt to fall into, while he spoke : which was an uncertainty in the tone of his voice ; for not hearing the sound he made when he spoke, he could not steadily govern the pitch of his voice ; but it would be sometimes higher sometimes lower ; though for the most part, what he delivered together, he ended in the same key as he begun it. But when he had once suffered the passages of his voice to close, at the opening them again, chance, or the measure of his earnestness to speak or to

reply, gave him his tone: which he was not capable of moderating by such an artifice, as is recorded Caius Gracchus used, when passion, in his orations to the people, drove out his voice with too great a vehemence or shrillness.

"He could discern in another, whether he spoke shrill or low: and he would repeat after anybody, any hard word whatsoever. Which the Prince tried often; not only in English, but by making some Welshmen that served his Highness, speak words of their language. Which he so perfectly echoed, that I confess I wondered more at that, than at all the rest. And his master himself would acknowledge, that the rules of his art, reached not to produce that effect with any certainty. And therefore concluded this in him must spring from other rules he had framed unto himself, out of his own attentive observation: which, the advantage that nature had justly given him in the sharpness of his other senses, to supply the want of this; endowed him with an ability and sagacity to do, beyond any other man that had his hearing. He expressed it (surely) in a high measure, by his so exact imitation of the Welsh pronunciation: for that tongue (like the Hebrew) employeth much the guttural letters: and the motions of that part which frameth them, cannot be seen nor judged by the eye, otherwise than by the effect they may haply make by consent in the other parts of the mouth, exposed to view: for the knowledge he had of what they said, sprung from his observing the motions they made; so that he could converse currently in the light, though they he talked with, whispered never so softly. And I have seen him at the distance of a large chamber's breadth, say words after one, that I standing close by the speaker could not hear a syllable of. But if he were in the dark, or if one turned his face out of his sight, he was capable of nothing one said."

The first thing to be remarked in this account is the allusion to Don Luis' teacher as a "priest," which, from what we know of Bonet and Carrion, must have been a mistake, probably due to some confusion in Sir Kenelm's mind with Ponce de Leon, of whom he had doubtless heard. There is another difficulty in the statement

that this teacher wrote a book and afterwards was in the service of the Prince of Carignan ; for we know that while Bonet wrote the book in question, it was Carrion who instructed the son of that prince. It is extremely unlikely that Carrion wrote a treatise on his method that never saw the light, and the facts before us point more to Bonet as the "priest" referred to.

It is therefore reasonable to conclude that, writing twenty years after his visit to Spain, Sir Kenelm Digby's memory had confounded different persons and circumstances ; but these inconsistencies are not material, and do not affect the trustworthiness of the narrative as a whole. Despite a tendency to hyperbole, Sir Kenelm is obviously telling us what he saw ; but if the facts are correct, the inferences which he intends to be drawn thence regarding Don Luis have not always been accepted. The incident of the Welshmen, on the face of it, presents some difficulty, and has even been regarded as incredible ; indeed, Dalgarno, in discussing this "well-known passage," while admitting its *esse*, doubts its *posse*, and accuses the "priest" of legerdemain.¹ Granting the possibility of collusion, which is not uncommon where there is a disposition to set off to the best advantage anything exceptional and of which the witnesses are not always the best judges, still facts can be adduced to prove that in this case no such imputation need be made. One is that in lip-reading it is possible for a deaf-mute to reproduce more or less correctly the words of a speaker, without knowing their meaning or the language from which they are taken. Next, there is a certain amount of resemblance in the

¹ *Didascalocophus*, pp. 38-40.

articulation of Spanish and Welsh. So that there is nothing to preclude the belief that Don Luis was proficient enough in lip-reading in his own language to be able to make some "happy hits" in another akin to it in articulation, if in nothing else.

Nevertheless, let criticism do its worst, Sir Kenelm's account remains of value as an independent testimony to the reality of the practical results obtained by the application of the method described by Bonet. Owing to Digby's fame, it attracted considerable attention. Bulwer, who, unlike Dalgarno, seems to have implicitly accepted it, made it the subject of a running commentary in his *Philocophus*.¹

It has been a moot point whether and how far Bonet was indebted to Ponce de Leon in formulating his method of teaching deaf-mutes. Some of his own countrymen appear to have been disposed not to give him any great credit for originality. Nicolas Antonio,² who says that Ponce de Leon invented the art and contradicts himself in ascribing a similar distinction to Carrion, thinks Bonet simply published Ponce de Leon's method. Morhof³ is of the same opinion, as also Feyjoo,⁴ who goes farther, and considers that Bonet was a "plagiarist and even an impostor;" but this was an unjust accusation founded on the mistaken impression that Don Pedro de Velasco was still living in Bonet's time, and that the latter wished

¹ Other evidence of the same kind may be seen in the bibliographical list.

² *Bibliotheca Hispana Nova* (1788), vol. i., pp. 354, 754, and vol. ii., p. 228.

³ *Polyhistor. Literarius*, edit. cit. sup., vol. i., pp. 340-2.

⁴ *Cartas, etc.*, sup., vol. iv., carta 7.

to appropriate to himself the credit of the instruction which Don Pedro owed long since to Ponce de Leon. Feyjoo either did not or affected not to know of Don Luis.

One thing is certain. Ponce de Leon's achievements were well known in his time, as Perez, in the approving notice already referred to, informs us, which indeed might be expected from their novelty, as well as from the high position of many of his pupils. Don Francisco and Don Pedro's successful education must have survived as a tradition in the house of Velasco into at least the two next generations. Bonet was born at no great distance from the date of his predecessor's death; and if he was not in the service of the Constable from youth, he must have been for some considerable time before publishing his book; so that we cannot doubt he knew perfectly well what had been done before him, and may even have learned something from later pupils of Ponce de Leon. Still, though the ideas might, so to speak, have been in the air, they would be too undefined to have any but an inspiring influence in the composition of his work, unless Bonet had access to Ponce de Leon's MSS. notes, a question we cannot decide. But even if he never saw them, it none the less shows a want of generous appreciation of his predecessor to be silent regarding him. It is a point in his favour that Bonet did not follow him in the place writing should have in the order of instruction. If we decline to give him the distinction which justly belongs to Ponce de Leon of having initiated the work, we cannot in the absence of anything to the contrary refuse Bonet the credit which is due to him of having written an original work, albeit

in such a manner as to give the reader the impression that he was not averse to wearing the laurels of the inventor.

As Bonet's work is now before the reader, it is unnecessary to review it in detail. It will, however, not be amiss briefly to indicate its plan and a few of its more salient points. It is divided into two books. The first is a treatise on the simplification of the letters of the alphabet, *i.e.* the reduction of their names to their phonetic elements; just as we may reduce *zed*, the name of the letter *z*, to the simple sound represented by this letter. Bonet conceived that by directly associating the letters with their phonetic forms rather than with their names, the task of learning to read would be greatly facilitated. The connection of this part with the next is explained by the necessity he perceived of reducing letters to their phonetic values, as a preliminary to any method by which deaf-mutes could be taught to speak. Except for this, Book I., besides being redundant, is of little intrinsic interest in relation to our subject; and just as are the views the author holds on the practical application of his theory, they are but grains amid much that is either fanciful or obsolete.

The second book is on the art of teaching deaf-mutes to speak, and properly falls into two divisions, the first consisting of seven chapters dealing with that subject, and the second of a grammar of the Spanish language adapted to the use of deaf-mutes, with numerous practical precepts. In this part our author treads on the firmer ground of experience; and as he unfolds his well-conceived ideas before us, we seem to emerge from the obscure essays of the past into the more enlightened

knowledge of the present. His perception of what is usually the true cause of dumbness; the necessity of making speech the basis of the deaf-mute's education, if it is to become his vernacular; his mode of rendering its acquisition easy and gradual by proceeding from the simple to the complex; the reduction of the elements of language to three essentials, the noun, verb, and conjunction (including adverbs and prepositions); the use of an objective form of instruction in the association of names with their objects, verbs with the actions signified, comparison by the contrasting of actual things; his exclusion of signs other than the manual alphabet; the training of the reason by a free resort to question and answer in all the circumstances of daily life,—these are all points that at once commend themselves. But there is room for criticism in other respects. Bonet's chief fault is the need which he imagined there was of committing to memory the various classes of words before learning their use in language, a process that unduly taxed the scholar's memory without any corresponding benefit. It was to render this task lighter that he would have the conjunctions, etc., learned before the verb. Bonet failed to realize how far-reaching the effects of the loss of hearing are on the mental constitution, or to see that the gradual acquisition of elementary language by use, which is really the starting-point of what we mean by education, has no counterpart in the deaf-mute's experience. He, in fact, introduced grammar too early in the course. And by postponing writing until after the scholar could read, he showed that he did not realize its value in fixing in the memory what has been orally learned, and which it possesses in

a higher degree than so fugitive a process as manual spelling. The truth seems to be that, after having reduced spoken language to its phonetic elements, he contented himself with adapting the course of instruction usual with those who hear to the special requirements of deaf-mutes.

One of Bonet's most marked points of difference from us is in not making lip-reading a special object of instruction, but leaving it to the ingenuity of the scholar, and he goes so far as to disclaim any credit on that score. It is, however, quite certain that this desirable attainment may be more quickly acquired and developed under the trained guidance of a master; but, at the same time, there are some who need reminding by this old teacher that their efforts in this direction are of little avail unless seconded by aptitude on the learner's part, even where his acquirements in speech are all that can be desired.

Dr. H. P. Peet concludes an analysis of Bonet's treatise in terms so just and apposite that we can do no less than quote them here: ¹—"Measuring his merit by the early period in which he lived, we cannot refuse our admiration to the acuteness of his observation, and the general correctness of his views. He has only sketched the outlines of a system of instruction, but he has sketched them, for the most part, correctly. With some tendency to an unnecessary display of learning, his genius seems to have been simple and practical. We find in his work neither Amman's notion of the Divine efficacy of speech; nor de l'Épée's theory of a language of gestures, laboriously expanded and made

¹ *American Annals of the Deaf* (1851), vol. iii., p. 210.

parallel in syntax, in terms and in inflexions with speech; nor the fanciful processes by which Sicard proposed to teach language to deaf-mutes, by following the steps which philosophers and metaphysicians might take to invent language. It may have been this simple and practical character of his views, that caused his course of instruction to be so much neglected, even by his own countrymen. The notions of Amman, of de l'Épée, and of Sicard, each in their turn, took strong hold of the imagination, achieved the popularity of their authors, and thus excited a wide-spread interest; the fruits of which we see in the establishment of numerous institutions—yet these peculiar notions now find but few or no defenders, while the views of Bonet, in the main, still stand."

Bonet does not tell us whence he derived the manual alphabet figured in his work, but this probably proves that it was tolerably well known; at any rate, he was certainly not its inventor, since, with some variations, it is identical with one figured in Rossellius' *Thesaurus Artificiosæ Memoriae* (Venice, 1579); while Hervas y Panduro's statement that it was invented by Ponce de Leon cannot be substantiated.

Part II. is followed by two short treatises, one on Ciphers, the other on the Greek language, which, having no intrinsic interest or relation to our subject, have been omitted in the translation. A brief note explaining how his method may be used by other nations concludes Bonet's work.

We must now return to Carrion. There is nothing to be learned of him in his one published work beyond

what has already been quoted ; and even if his method were known, it would probably be found to be in no way different from Bonet's, with which he was certainly acquainted. But it has been supposed that Ezechiele di Castro, who, as we have seen, had some intercourse with Carrion, had given some indication of it in a paper which Dr. Sachs de Lewenheimb, a German physician, had in his possession and published in the first volume of a collection of observations. In this paper is described a medical arcanum for the cure of deafness, which is attributed, amongst others by Hervas y Panduro, to Carrion, whom he speaks of as a physician. Despite its palpable absurdity, this remedy must find a place here.¹ The writer repeats the facts we have already quoted (p. 41), and after telling us that Castro succeeded in restoring speech to a congenital deaf-mute in two months, proceeds to describe the method as follows :—

“First the deaf-mute ought to purge himself according to the state of his constitution ; and then he ought to be given a special purgative of black hellebore, either in the form of a pill or of a decoction of an eighth of the root of this plant. The author took three ounces of this decoction, into which at night he put two-eighths of agaric, and having strained it added two ounces of syrup of epithyme. Having cleared out the head with this medicine once or twice according to necessity, the hairs on the

¹ *Miscellanea Curiosa Medico-Physica Academiae Naturæ Curiosorum, sive Ephemeridum Medico-Physicarum Germanicarum Curiosarum*, 1st year, 1670 (Leipzig, 1670). Obs. 35. [*D. Petris a Castro (sic) mutis loquela data, et surdis auditus*]. This passage is translated in Hervas y Panduro's *Escuela, etc.*, vol. i., pp. 39-42, and is also mentioned by d'Ablaincourt in his *Caprices d'Imagination* (Paris, 1740), and by M. Eidons in his *Mémoires Littéraires sur Differens Sujets de Physique, etc.*, art. 13 (Paris, 1750).

crown of the head are shaven, leaving a space the size of the palm of the hand, and to this shaven part he applied a salve, consisting of three ounces of brandy, two-eighths of saltpetre and of purified nitre, and one ounce of oil of bitter almonds. This composition is boiled until the brandy is consumed, then one ounce of naphtha is added; it is then well stirred with a spatula, and reduced to the consistency of a liniment. With this salve the shaven part of the head is anointed once daily, chiefly at night, when the patient goes to sleep. By morning, after the patient has cleared out all the ducts of the brain, the ears, nose and palate, chewed a grain of mastic, or a little liquorice—or, what will be better, a paste of liquorice juice, mastic, amber and moss—combed back his hair neatly with an ivory comb, and lastly washed his face well, he is to be spoken to at the crown of the head, *i.e.* the shaven part: and it is wonderful how clearly the deaf-mute perceives the voice, which he could not in any way have heard by the ears.

“If the deaf-mute does not know how to read, he must first be taught the alphabet; and every letter of it should be repeated several times until he can pronounce it; and then he is to proceed to acquire a knowledge of the mode of pronunciation, and thus he must persevere daily, until from the pronunciation of letters he attains to that of words, and common domestic objects are to be shown him that he may learn their names; and finally a number of words are to be spoken together, so that he may be able to join them in proper order in discourse. In the first fifteen days the deaf-mute learns names at so marvellous a rate, that without a very retentive memory he cannot make use of them; facility is, however, acquired by practice, and it causes wonder to see the eagerness with which he tries to constantly break out in words.”

Dr. Neumann,¹ comparing this with the account of Carrion by Castro we have previously quoted, thinks it too fabulous to be seriously accepted; and Walther agrees with him in believing that, assuming Carrion to

¹ *Geschichte des Taubstummenunterrichtes in Spanien und Frankreich.—Die Taubstummen-Anstalt zu Paris im Jahre 1822*, p. 67 (Königsberg, 1827). Dr. Neumann refers only to d'Ablaincourt's version.

have really made use of such mysterious processes, it could only have been for appearance' sake, lest he should excite the suspicions of the Inquisition by an innovation which, introduced by a layman, seemed at that time all but miraculous, since no reasonable person can believe that such means could possibly make any one speak.

It appears to us, however, that there is no evidence to warrant the belief that Carrion employed any such means as a part of his method. Castro simply says that he learnt it *partly* from him and *partly* by study; and there is no reason why he, as a physician, should not have himself invented the remedy to meet those special cases in which the loss of hearing is only partial, more especially as it is a matter of common observation that this class frequently hear best when spoken to at the back of the head. With its efficacy or otherwise we have no concern. It is more probable that it was the method of teaching deaf-mutes speech, as indicated in the last part of the above extract, that Castro learned from Carrion.

According to Hervas y Panduro, Bonet died about 1629; and as the Prince of Carignan was born in 1628, Carrion must have lived well on to the middle of the century.

If, as has been remarked by some, the rise of the art of orally teaching deaf-mutes coincided with the most flourishing period of Spanish history, a similar coincidence may be noted between its decline and the rapid decay of the country's power and greatness. The seeds sown by Ponce de Leon and Bonet may have fallen on fruitful soil here and there, but most of it fell

on stony ground, for deaf-mutes did not as a class benefit by their discoveries. Feyjoo, writing about 1749,¹ laments "the fate that has attended the Spanish of the last two centuries, who have toiled to procure the riches of the country, as also those of the intellect, not for their own enjoyment, but that of foreigners. The art of teaching the dumb to speak had its birthplace in Spain, and I believe that there is not in this country, nor has been for a long time, any one willing to cultivate or test it, while foreigners have made and are making great use of it."

In fact, so completely forgotten had the claims of Ponce de Leon and Bonet become at the time the work of de l'Épée and others was attracting universal attention, that it was necessary to vindicate them. Happily their title to fame is now acknowledged; and the success of modern teachers, following, as they do, in their steps, is the best tribute that can be paid to the memory of the three men whose life and work we have tried to portray.

¹ *Theatro Critico Universal* (5th edit., 1749), vol. iv., p. 419.

LIST OF BOOKS CONTAINING NOTICES OF PONCE
DE LEON, BONET, AND RAMIREZ DE CARRION,
NOT REFERRED TO IN THE INTRODUCTION.

1635. Castro (Stephanus Rodericus). *Commentarius in Hippocratis Coi, Libellum de Alimento.* Florence.

Page 247. The author mentions hearing from a traveller, returning from Spain, of the invention of the art of teaching the dumb to speak, who had also brought a book on the subject.

1646. Cabeus (Nich.). *Philosophia Experimentalis, sive in IV. Libros Meteorologicos Aristotelis Commentaria.* Rome.

Vol. ii., text 56, quæst. 4. The author mentions as a wonderful circumstance, that he had heard of a deaf-mute in Spain who could write, and of a book having been published on the subject.

1666. Caramuelius (Aspasius) [P. Gaspar Schott]. *Joco-Seriorum Naturæ et Artis sive Magiæ Naturalis Miscellanæ.* Amsterdam.

Page 102. The author, a German physician, quotes Sir K. Digby's account of Don Luis de Velasco.

1670. Lana (P. Francesco). *Prodromo Overo Saggio di Alcune Inventioni Nuove Premesso all' Arte Maestra.* Brescia.

The author, an Italian naturalist and physician, in the course of a discussion as to the possibility of teaching deaf-mutes to speak, cites Digby's account.

1685. Bonetus, M.D. (Theo.). *Medicina Septentrionalis Collatitia.* Geneva.

Vol. i., p. 452. The author quotes the passage from Castro's tractate referring to Carrion, and also mentions Ponce de Leon.

1700. Pasch (George). *De Novis Inventis*. 2nd edit. Leipzig.
 Pages 603, 613. Notices of Ponce de Leon, Bonet, and Carrion.
1717. Leibnitz (G. G.). *Collectanea Etymologica*. Part II.
 Hanover.
 Page 403. A B C Dario, que comprende el arte de enseñarle ablar por la mano, reducido a mucha brevedad para que con facilidad se pueda tener en la memoria. (Sacado del arte de enseñar ablar a los mudos, que es de donde tubo su origen.)
1732. Morhof (D. G.). *Polyhistor Literarius*. 3rd edit.
 Lubeck.
 Vol. i., p. 340. Caramuel (*Apparatus Philosophicus*) is mentioned as having written an epigram on the art of teaching deaf-mutes to speak, as described by Bonet. Notices of Ponce de Leon, Bonet, and Carrion, and their claims to priority.
 Vol. ii., p. 137. Notice of Bonet's treatise.
1749. Feyjoo y Montenegro. *Theatro Critico Universal*. 5th edit.
 Madrid.
 Vol. iv., pp. 417-9. Notice of Ponce de Leon and his method.
1752. Mayans y Siscar (G.). *Disputationes Juris*.
 Lugd. Batav.
 Vol. i., p. 455. The author, who was librarian to King Philip V., attributes to Ponce de Leon the invention of the art of teaching deaf-mutes to speak. J. Pellicerus (*Idea Principatus Gotholannia*, p. 490) is cited on the subject.
1753. Ditto. *Specimen Bibliotheca Hispano-Majansianæ, sive Idea Novi Catalogi Critici Operum Scriptorum Hispanorum, quæ Habet in sua Bibliotheca*. Hanover.
 Page 142. In this the author ascribes the honour of having invented the art to Bonet.
1754. Ziegelbauer (R. P. M.). *Historia rei Literariæ Ordinis S. Benedicti*.
 Vol. iv., p. 729. Notice of Ponce de Leon; the same as in Antonio's *Bibliotheca Hispana Nova* (1788). Vol. ii., p. 228.

1761. Haller (Albert v.). *Elementa Physiologia Corporis Humani.*
Lausanne.

Vol. iii., p. 476. The author just alludes to Ponce de Leon, Bonet, and Carrion.

1774. De l'Épée (Abbé). *Institution des Sourds et Muets.*

Paris.

Page 2. "To teach deaf-mutes how to dispose their organs, in order to express sounds and form distinct words, is an operation which is certainly neither long nor painful. Three or four lessons will greatly advance if not accomplish this work, by following the method of M. Bonet, a Spaniard, printed one hundred and fifty years ago."

1784. Ditto. *La Veritable Manière d'Instruire les Sourds et Muets.*
Paris.

Page 159. "I availed myself with pleasure of the facility which writing and methodical signs afforded me, of instructing deaf-mutes, and never thought of untying their tongues, until one day a stranger came to our public lesson, and offered me a Spanish book, saying that if I wished to buy it I should do its owner a true service. I replied that it would be quite useless to me, because I did not know the language; but, happening to open it, I saw the manual alphabet of the Spaniards, well engraved on copper-plate: I needed nothing more; I kept it and gave the messenger what he asked for it. I then became impatient with the time my lesson took; but soon, what was my surprise, when opening my book I found on the first page this title, *Arte Para Enseñar a Hablar los Mudos*. I had little need to guess that this signified *the art of teaching the dumb to speak*, and from that moment I resolved to learn the language, so as to be in a position to render this service to my pupils." De l'Épée next mentions acquiring Amman's *Dissertatio de Loquela*, expresses his deep obligations to these two masters, and says that "their works are two torches, which have lighted me on my way, but in the application of their principles I have followed the route which appeared to me the easiest and quickest." De l'Épée does not appear to have known much, if anything, of Ponce de Leon.

1793. Andres (D. G.). *Dell' Origine e delle Vicende dell' Arte d'Insegnar a Parlare ai Sordi-Muti.*
Venice.

The author, a learned Spaniard resident in Italy, vindicates at

some length the claims of Ponce de Leon and Bonet, which he considered were in danger of being overlooked in consequence of the fame of de l'Épée, then at its height.

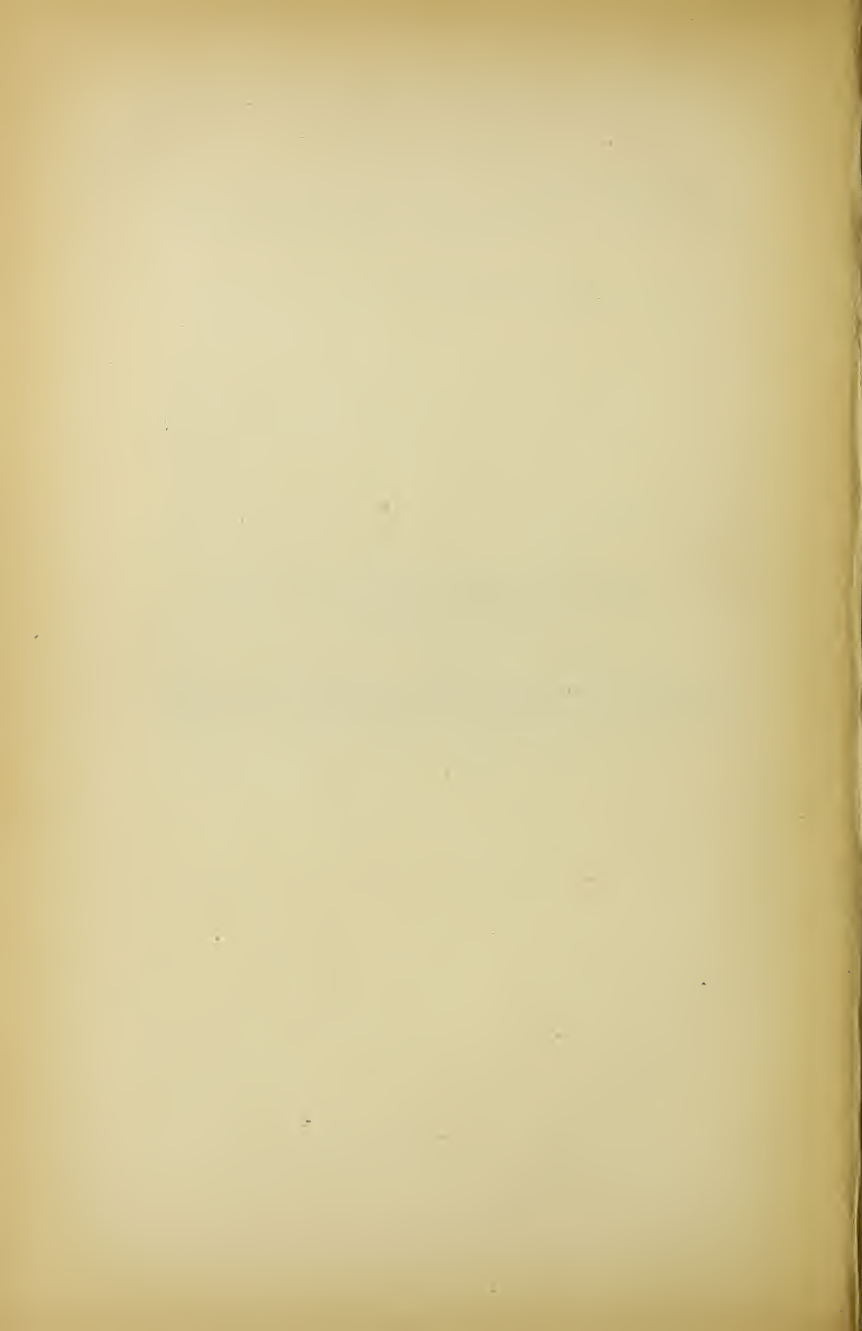
1795. Hervas y Panduro (Lorenzo). *Escuela Española de Sordomudos, o Arte Para Enseñarles a Escribir y Hablar el Idioma Español.* 2 vols. Madrid.

Vol. i., pp. 294-335. This is practically a history of the education of deaf-mutes down to the author's own time, but a considerable part is devoted to Ponce de Leon, Bonet, and Carrion; the author giving us to understand that his motive was the patriotic one of restoring them, especially the first, to their rightful positions as the earliest to develop a theoretical and practical method of educating deaf-mutes. It is the first complete account of them, and little, if anything, has since been added. This portion has been translated into French and published with notes by A. Valade-Gabel (Paris: Delagrave, 1875). He states that another edition was issued in 1799. Hervas y Panduro was at first Professor of Philosophy at Madrid, afterwards a Jesuit missionary in America, whence, being driven by the proscription against his Order, he came to Rome, and was appointed to the charge of the Quirinal Library in recognition of his important philological researches. These circumstances led him to take an interest and ultimately an active part in the education of deaf-mutes.

SIMPLIFICATION OF THE LETTERS
OF THE ALPHABET

AND

Method of Teaching Deaf-Mutes to Speak.



Testimonial of the Most Reverend Father Fray Antonio Perez, Abbot of the Monastery of St. Martin at Madrid, of the Order of St. Benedict.

By order of your Highness I have examined this book, compiled by Juan Pablo Bonet, Secretary to the Constable, on teaching the dumb to speak, and it appears to me that its publication should not only be permitted, but commanded and rewarded, because it deals in a careful and skilful manner with a most important and difficult subject, and one much to be desired in our country of Spain, since our brother Pedro Ponce de Leon gave invention to this wonderful work of teaching the dumb to speak; who on this account is renowned both among natives and foreigners for his marvellous skill; yet who never thought of teaching it to another, although it is clear how much better it is to "make" masters in a profession than to "be" so; and therefore it appears to me that this work is the more worthy of publication.

In this monastery of St. Martin at Madrid, on the last day of April 1620.

FRAY ANTONIO PEREZ.

Dedication to the King of Spain.

This book has been written in your Majesty's service (since it is intended for the public good), and it would be an improper thing not to dedicate services and acts of a servant to one who was master of both himself and them. I beg your Majesty with the utmost humility that it may please you to admit it among the former services which I have been able to render in other matters, in France, Savoy, Italy, and Barbary; and to honour me by glancing over it with your royal eyes; and though I ask much while deserving little, I hope that your Majesty may be moved by curiosity from the unusual nature of the subject. And may our Lord preserve your Catholic Person in accordance with the needs of Christianity and of your subjects.

JUAN PABLO BONET.

LOPE DE VEGA CARPIO AL AUTOR.

Los que mas fama ganaron,
Por las ciencias que escriuieron,
A los que ya hablar supieron,
A hablar mejor enseñaron,
Pero nunca imaginaron,
Que hallara el arte camino,
Que los defetos preuino
De naturaleza falta ;
Sutileça insigne y alta
De vuestro ingenio diuino.

La Rhetorica hallar pudo
El arte de bien hablar
Pero nunca pudo hallar
El arte de hablar un mudo :
El mas rustico, el mas rudo
Con lengue puede aprender,
Hasta llegar a saber :
Pero hablar sin ella un hombre,
Assombra : pero no assombre,
Si soys quien lo pudo hazer.

Que si Dios puesto no huiera
Tan diuino ingenio in vos,
Solo del poder de Dios
Digno este milagro fuera :
De donde se considera
(Debaxo de la doctrina
Que la Fee nos determina)
Pues que Dios lo puede hazer,
Que os sustituye el poder
La misma ciencia Diuina.

Que lo posible pudistes,
Con alto exemplo se vee,
Tan Mathematica fue,
La demostracion que hizistes :
Voz quitastes, y voz distes,
Pues no os acierto a alabar,
Los mudos pueden hablar,
Quando yo lo vengo a ser,
Que no siento enmudecer,
Pues vos me aueys de enseñar.

LOPE DE VEGA CARPIO TO THE AUTHOR.

The brightest laurels won by writers of wisdom were gained in teaching those who could already speak to speak more perfectly ; but never did they dream that Art should find a way to remedy the faults of Nature,—that grand and lofty flight of thy divine genius.

Rhetoric might teach how to perfect speech, but could never find a way to give speech to the speechless ; the unlettered rustic, the most untutored boor, may arrive at the portals of knowledge if he have a tongue ; but without it that a man should speak is a marvel :—yet no marvel were it thou who didst perform it.

For had not God bestowed on thee a genius so divine, this miracle had been worthy of His power alone ; wherefore the teaching of our Faith makes it clear to us that whereas God Himself could do it, His Divine wisdom has invested thee with His own power.

That what thou hast done is possible this great achievement shows, so clearly reasoned is thy demonstration. Thou who canst give speech hast made me speechless, so that I cannot fitly praise thee. The dumb can speak, the poet is struck dumb ; yet I deplore it not, for thou canst teach me.

PROLOGUE.

TIME, the discoverer of novelties, recorder of things of old, test of their truth, and perfecter of their value, has in various ages, through the aid of eminent men, made so many discoveries, and so perfect and of such variety as we know ; things necessary for our lives, confirmed by experience, and perpetuated by Arts ; in which we may say they have entered into an alliance with Nature, aiding her, and adding a finish to what she has begun, so that certain of her works which were left imperfect they have by supplementing and labouring at them made complete ; and the ancients looked upon this with such high approval, that to those who were inventors of any art, or who discovered any secret whereby they might aid or preserve themselves with less toil and greater security, they gave the sovereignty over them ; and on this principle they chose many of their kings, crowning them in their lifetime, and worshipping them as gods at their death, the honour being continued to their posterity, not only as the reward of the public good wrought by them, but to show that the recognition of it lasts for ever ; and the more so since there is so great a kindling of ambition and covetousness, and so great a need of remedies for the sufferings of people from the natural defects with which some are born ;

and especially those which prevent the manifestation of the rational intellect, as in the case of deaf-mutes, since by this defect they lose the power which men have of communicating with others, so that it might appear as if they were of no more use than those pitiable freaks of Nature which imitate the human form. And though this is the case, and the need is so general, and the remedy possible, yet the sages of old and modern philosophers, the most studious examiners into nature and her wonderful effects, who have moreover spent much time and labour in the search for remedies for every other part of our frame which is liable to injury, have either never sought a remedy for this, or have never found one; and yet it is an infirmity that can be cured by the application of industry, and by a Method so certain and sure as to be demonstrable and beyond dispute, and so comprehensive that we may by its means succeed not only in teaching the deaf-mute to speak, but also to read, write and count, and do everything else which is done by those who are free from that defect, and this by a method of reasoning so clear and intelligible, that he can understand and make understood the thoughts of the mind, to such an extent that no effects of his lack of hearing can be perceived; and this is accomplished by teaching speech through the medium of writing and of the finger alphabet, being founded entirely on the great perfection of our letters, the primitive names of which having once been found it is possible to habituate the deaf-mute to their use without symbols, and in a natural and scientific manner, just as we learn who can speak and hear, and without making use of violent sounds, or ill-treating the throat,

but rather by a method so easy and plain that any one can teach it ; and for this purpose I have been careful to explain myself as clearly as I could, in order to make it a more general boon and of greater and wider use ; and that it may be, by chance, of value to foreigners, since the evil is common to all, and the remedy may be so also, I conclude the work by showing how it may be used by them, which cannot be done by simply translating it.

I was moved to this undertaking by love and gratitude towards the house of my lord the Constable, where at the present time a brother of his Excellency is afflicted in this manner (though it is not congenital in his case, since he had his hearing up to the age of two years), and by the immense labour expended by his mother, my lady the Duchess, in seeking out all possible remedies to supply the defect, making enquiries of different persons, and sparing no expense in order that so noble a gentleman might not be left unaided. And as those seldom fail who seek after anything with great earnestness, I began, as became a grateful and faithful servant of her noble house, to search with particular diligence, contemplating, examining, and testing Nature in every way wherein she seems to supplement by the other senses that which is lacking in any one, seeking always the perfection of the whole which she has fashioned by her wisdom and power ; and I then went on to consider with extreme care how to find a way by which intelligence might be brought to the mind, avoiding the barrier which could neither be broken down nor scaled, till I found at last a secret way of entrance, and a plain pathway ; founding the

whole method upon the fact that the nomenclature of our letters is so simple as to be well-nigh self-evident, and Nature does not deny to deaf-mutes the comprehension of what is self-evident, but seeks rather to supply them with an acute perceptive faculty that goes far to compensate them for the hearing they lack ; and, therefore, in order to follow up the benefit here discovered in the extreme simplicity of the names of our letters, it seemed necessary to treat of them in the first book, as being a matter of great importance from the useful results ensuing from it ; for in addition to the instruction of the deaf, we may by its means teach children to read in ten or twelve days. And to this end I have endeavoured to find out the names which were given to the letters of the alphabet by their first inventors, and have sought for the origin of this ingenious discovery—a discovery which the eminent historian Juan de Barros speaks of as seeming rather to have been inspired by God than made by the human intellect. And he might have said this with the greater justice had he seen the results which attend it in this work, when he would have laid more stress not on the discovery of letters in general, but on the nature of our Latin ones in particular ; for they are in reality the only ones which deserve the name of letters, as will be shown in this book ; which quality of theirs is so wonderful that I might almost go farther, and say that they alone deserve to be called natural letters, in which Nature herself would support me, proving the truth of the saying by the results, since it is clearly shown by the fact that the deaf can learn to speak by their means alone, and not by any other letters, not

being able to understand them on account of their compound names, which render them incapable of demonstration.

Certain other curious results follow as corollaries upon this theme, which should be held of some importance on account of their novelty, such as a tract teaching how to read ciphers that have no artifice beyond the transposition of letters, and also showing how they may be written so as to be undecipherable without a key ; and another showing how to teach oneself to read Greek in eight days, in addition to our own language, or, if that is previously known, in two ; by discarding in both the erroneous and confused nomenclature of the letters ; with a full exposition of the abbreviations of those letters.

And since the discovery of things that are new is difficult, and their reduction to principles is no less so, if I have in any way failed in the development of my method in anything which all my care has been unable to foresee, it is not because of any flaw in the truth, which not only is demonstrable, but has been demonstrated, nor because it fails to be embraced in the rules which I have formulated ; but because some of the rules have been abbreviated to avoid prolixity, and because my principal design is that of brevity, though the theme demands and is capable of filling large volumes, and is of such wide interest that there is hardly a subject that does not bear upon it with some degree of relationship. But, for my part, I am contented to know the usefulness of this work of mine, leaving the greater wisdom of others to add to it and supplement it, and to put with more clearness of reasoning the confused

ideas which would be abortive if not published, and which have taken more time to put into words and to commit to writing than all I have spent in arriving at a decision as to what I wished to say.

The whole work I offer to my native land of Spain and my country of Aragon, wishing it to be considered as an offering for the public good, and without having been moved in any way by ambition or desire for gain; by which I shall give the thoughtful reader the more occasion to honour me, whether by acknowledging my labours, or by adding to them by his own learning; for although it may be considered an easy thing to make additions to an invention, I shall not fail to hold it as worthy of the greatest esteem.

BOOK I.

ON THE SIMPLIFICATION OF THE LETTERS OF THE ALPHABET.

CHAPTER I.

The letters used in our Spanish language are the Latin ones, of which tradition has succeeded in changing the names.

ALTHOUGH many authors, both native and foreign, have treated in their writings of our Spanish language, and of the letters with which it is written, at such great length and with such learning and judgment that it might seem they had left nothing to be added; and though in this work we have to deal with the same subject, for a purpose as widely different as it is useful; we shall not do so by adding to the matter already written, or by following the opinions of others. But we shall, on the contrary, pass over all the works written up to this present time, although they may seem by their titles to be related to our subject. And since one of the objects held in view in writing this book is to succeed in making it as short as possible, we shall deal as briefly as may be with whatever is not essential to the demonstration of the error existing in the nomenclature of our alphabet, which forms the

basis of this method—an error which is the cause of such great delay in teaching children to read, while it is possible to teach them in twelve days or even less.

Moreover, the ease with which Art can supply the greatest defect of Nature in teaching the dumb to speak is a thing incredible to popular belief, and one of which not only the accomplishment but even the suggestion will give rise in the uninitiated to a sea of doubts, since it appears to be beyond the limits of Nature, who seems to have rendered speech impossible, and to have denied it to the deaf, while her office is ever to press on towards the attainment of what is complete; and as this is one of the most important achievements conceivable, it might seem that Art in accomplishing it seeks in this matter even to surpass Nature.

And to commence with the first proposition, it must be noted that our ordinary Spanish language is agreed by authors generally to be composed of several different tongues, because every nation that peopled or subjected Spain left here a great part of its own speech, which is especially the case with the Hebrew, Gothic, Latin, and Arabic. But as regards the character and pronunciation of the letters with which it is written, there can be no doubt that they are altogether Latin; for all these languages admit of being expressed by twenty-two Latin letters. And although the Gothic letters, invented by Bishop Ulfilas the Goth, began to be introduced, as is related by P. Juan de Mariana, yet their use was discontinued in Castile when the Toledan Missal, which was in Gothic, was disused in favour of the Roman one (which was called Frankish at that time), by a proclamation of the king Don Alonso VI., who beheld

in a vision the Roman one rise out of the fire, while the Gothic remained there, though without being burnt. And the same thing was before commanded in Aragon by the king Don Ramiro I., as is related by Geronimo de Zurita in his annals of that kingdom.

Turning then to our letters, those which we use are *a, b, c, d, e, f, g, h, i, l, m, n, o, p, q, r, s, t, u, x, y, z*; and the name which custom has given to each of them is well known. These have been divided into vowels, consonants, semi-vowels, mutes and liquids. The five vowels are so called from their simple articulate voice, sonorous and significant, as is necessary for the part which they play: the seventeen others do not retain their proper names which were given them or ought to have been given them at their original invention, as we shall speak of below. But as all things which are known only by tradition have been subject to increase or diminution, we shall take sufficient opportunity to discuss whether the defect that we find in the names of the letters is a fault which has been inherent in them from their first invention, or a corruption and error due to mistaken tradition. And for this purpose we shall proceed to enquire in what way the first inventors could have made so ingenious and clever a discovery; and it will be found to be no great wonder that tradition has changed the names of the letters—names which are not capable of being written down on account of their simplicity, since even in that which is not merely handed down by oral tradition as they have been, but also subjected to writing, experience shows the great difference between the way in which it is now spoken, and that in which it was spoken not many ages back; for in ancient writings

there are found many things which can only be understood with great difficulty. And the Latin language, which does not admit of freely changing the words, is at least subject to being so pronounced as to fail in being understood. Which, indeed, happened to Joseph Scaliger, as he relates in a letter written to Stephanus Ubertus, and published in his works, telling that after having conversed with an Englishman for a quarter of an hour in Latin, and having understood him no better than if he had spoken in Turkish, he asked a common friend who had been present during the whole conversation to excuse him to the speaker, because he was not acquainted with the English language, supposing that he had been talking in that tongue. So great, then, is the difference between the ways in which different races will pronounce the same language, that such an eminent Latin scholar could fail to comprehend it, and give occasion to the friend who was asked to excuse him to laugh at his mistake, which he actually did.

CHAPTER II.

Were the Latin letters invented, and if so, how did the invention take place?

WHO the first inventors of the letters of the alphabet were is a matter on which there is much difference of opinion among those who have treated of it; for some say it was the Syrians, some the Egyptians, some the Ethiopians; others give this honour to the Phœnicians, saying that Cadmus brought these seventeen letters to

Greece—*a, b, c, d, e, g, h, i, l, m, n, o, p, r, s, t, u*; while the others were added later. Others affirm that the inventors were the sons of Seth, who wrote on heavenly things, and fastened their writings upon two columns. But be the inventors who they may, what is of importance for our purpose is to set about investigating the way in which they succeeded in lighting upon so valuable a discovery, and if they gave to our Latin letters the compound names that many of them have, or if they gave simple names to all; for in this way we shall throw more light on what we have to deal with later on. And if it should seem that too much time is spent in discussing this question, it must be remembered that this whole system of teaching depends on substantiating it upon this basis; and since it is a matter never hitherto written upon, and since it has not only to be accepted by custom, but also to be adopted, and to supplant that which at present holds the field, it will not do to turn the customary belief out of possession and introduce another in its place, except at the price of a thoroughly complete proof.

Our Latin letters, it must be presupposed, were either invented or copied from some others, and we have therefore to discuss each of these possible cases.

And to begin with the first, supposing them to have been invented; it must be noted that the whole range of our speech reduces itself to twenty-one different positions taken by the mouth, varied by means of the tongue, teeth and lips, in the formation of sonorous breath, whence arise so many varieties of sounds; and these being pronounced in conjunction produce syllables and words, and speech is formed when the soul declares

in this way the ideas which it desires to express ; and it is clear that there are no simple sounds beyond these twenty-one, since if there had been we should necessarily feel the want of them, for everything that is spoken can be written, and in order to write it we must have letters ; and since a spoken word is formed of different articulations, and is expressed in writing by letters which are the equivalents of these articulations, therefore when there were any occasion to express a sound in writing for which there was no existing equivalent, the need would of necessity be felt, as has been said ; and any exceptions that there may be will be dealt with later on, as in the case of the "tilde" (~) over the *n*, the "cedilla" of the *ç*, and the variations in sound of the *c* and *g*.

All these sounds then being reduced to twenty-one, they invented as many separate symbols, one for each, and these are the characters, marks or delineations which are called letters, each one equivalent to the sound that it represented, and each character was used for that articulation alone for which it stood. For example, to the clear and sonorous breathing which is formed by opening the mouth and keeping the tongue at rest, they gave this character, A, as its symbol ; and to another articulation less forcible and not so sonorous, formed when the lips are slightly closed and then opened for the breath to escape, they gave this character, B ; while they might have given them entirely different ones, so long as each signified always the same thing. And if these characters were not chosen by chance, but with particular heed, the reasons will be hereafter mentioned why they were not casually chosen, but these particular forms of character rather than any

others. And so they proceeded with all the remaining sounds, giving each one its symbol; and these were afterwards called letters. Hence writing is nothing more than joining together as many different letters as the sounds which compose the word pronounced, keeping the correct order, so that each letter shall be the one corresponding to the articulation to which it has been assigned as symbol, and which has for its name the sound of that articulation. And should it not seem possible to have so recognized and distinguished the different sounds of which speech is composed, as to reduce them to an enumeration and nomenclature so clear that each might be represented by a separate symbol with its appropriate name, which has caused Polydore Virgil no small astonishment, yet it is quite possible and easy, and similar to what we observe every day, when we touch with the hand a musical instrument where one who is acquainted with it can hear, and he can tell, without seeing the string or key which is touched, the name of each, and that without any study beyond practice; and this becomes easy when practice is united with necessity, both of them such skilful teachers, especially when the attention of the hearing is carefully fixed, just as is the case with the deaf in the matter of sight, since by the movements of the lips of those who converse with them they can understand much of what is said to them; while we who hear should not be able to do any such thing, since the argument of necessity does not weigh with us as it does with them, and as it did with the first inventors of letters.

We have spoken of twenty-one characters, notwith-

standing that we have twenty-two in use (besides the *k*, which will not be dealt with, since we do not employ it); and the one which has to be omitted as far as the sound goes is the *y*, which we call the *y grec*, for it has the same value as the *i*, which is the true Latin form; hence there is no need of the *y*, nor did the inventors include it. And if we did not employ it at all, it would not prevent our writing correctly, since it and the *i* have the same pronunciation, which would not be the case if any of the other letters were omitted, for they are all different, as has been said. But this letter, *y*, is so well established in our alphabet that there is no inconvenience in its use, there being so much that is written with it, and it would seem that it is well established and incorporated with the other letters; while when used by itself it performs the office of a conjunction, which is to unite ideas, though certain authors do not make use of it in their writings. This seems to have been the feeling of Dr. Bernardo Alderete, where in the whole of his work on the origin of the Spanish language he would not make use of the *y*, but only of the *i*, which alone, he intended to show, belonged to the primitive Latin alphabet. And the learned Simon Abril, in his work on Greek Grammar which he wrote in the Romance tongue, also made no use of it, but only of our *i*, while he called the *y* the *y grec*; and the absence of this letter in Latin, except in the case of words taken from the Greek, teaches that it is not a Latin letter, but one introduced into ours by custom from the Greek alphabet. Antonio de Nebrija, too, passes it by, saying that the *y* is a vowel of the Greeks.

CHAPTER III.

Supposing that the origin of the Latin letters was by imitation of others, what letters were they which were imitated, and how did it take place?

IT does not appear that the Latin letters, or indeed any other letters, could have arisen by any different process than that above described, if it be the case that their origin were independent and not an imitation of others; but if it were an imitation, which is most certain, then it is important for us to do what we have purposed, and show what letters those who borrowed them imitated, how the process was carried out, what letters were taken, and what were left. It would seem that, having to introduce letters by the imitation of others, they would naturally have recourse to the mother-source and origin of them; and that in order to adjust them to the Latin pronunciation, they would select as many of them as they had need of, leaving all that were unnecessary and superfluous, as we should do in making a selection.

And it must be borne in mind that the importation of letters from one country to another does not consist in taking over the material characters or symbols which are called letters, the form of which is of very little importance; but in taking the sounds which these represent, and adjusting them to the sounds of the language. And if there are fewer sounds in one language than the other, there will be in consequence need of fewer letters; but if there are more, there will be need to add as many more letters as there are sounds which lack representation. The letters which are well known

to be held the most sacred and the most sought after are the Hebrew, Greek and Latin. This, St. Isidore says, is on account of their being the ones in which has been written all that pertains to our holy faith, by patriarchs, prophets, evangelists and doctors of the Church, as well as by such a number of saints ; and also because it is in these three characters that the inscription upon the Cross of Christ our Lord was written, which was with the intent that it should be proclaimed to all the earth, through the universality of these three languages. That which may be called the parent of the others, and which through its antiquity must have been so, is the Hebrew ; and thus we have to determine for what reason the other letters were borrowed from it, which can be done without any prolixity, since St. Augustine has written at such length upon it in his *Civitas Dei*, and St. Isidore in his Etymologies, which are given from before the confusion of tongues, saying that there was one language alone in the world then, as appears from the Book of Genesis ; and this, he adds, was the Hebrew, which was preserved by Heber and his posterity, whence it received the name of Hebrew, having had no name hitherto ; since as there was only one language there was no need of distinction.

Now that we have found the age of language, we have to discover what antiquity the letters hold in it. Josephus, in his *Antiquities of the Jews*, says that of the two columns set up by the grandsons of Adam, children of Seth, which were one of brick, the other of stone, on which they left the arts written and engraved, the one of stone remained in the land of Syria even to his time. St. Isidore shows that the Latin and Greek

letters took their origin from the Hebrew ones, though he does not attribute a greater antiquity to these than from the time when God gave the law to Moses. St. Augustine gives them a greater age, laying particular stress on this point—that there must have been letters previously, since Moses himself appointed persons to teach them to the people previously to the time when he received the written law. So that we may fairly consider these to have been the oldest, and the Greek and Latin to have been introduced in imitation of them.

Those states which desire to introduce the laws or particular modes of government of other states, impelled by the fame of their policy and stability, select from them the most tried and perfected, and those which can best be adapted to the nature of their land and the condition of the people who are to receive them. And so with the Latin letters ; if their introduction took place by means of the Hebrew ones, the borrowers chose, as we may truly say, the quintessence of them, since the part which they selected possessed the full value of the whole from which they took it. To make this clearer, we may take the first letter of the Hebrew alphabet, which is called *Aleph*, a name composed of five different sounds, represented by these five letters ; and though the pronunciation is so rapid as apparently not to allow that all should be distinctly intelligible, there is no doubt that they are so, and that they are all actually pronounced. And this may easily be tested by trying to pronounce the name of this letter, leaving out in turn each of the five letters of which it is composed, and leaving out at the same time the sound represented by the letter—as *leph* without the *A*, *Aeph* without the *l*,

Alph without the *e*, and so on with the others, which all of them produce different sounds, and each one that is omitted leaves the letter with a different name. But just as this compound part is of no use in Hebrew reading when accompanied by other letters, so no use was made of it in Latin, but only of the *A*, the first of the five sounds which the name *Aleph* contains. This exclusion of the superfluous part was a wonderful advance, leaving out the compound *leph*, and taking only the *A*, the part which possessed the full value of the whole from which it was taken; since this simple sound is all that is used, and none of the four which make up the *leph*. And it is thus, as has been said, the quintessence; since while it is the fifth part, it retains the value of the whole. The same applies to *Beth*, from which *B* was taken; as was *G* from *Gimel*, and *D* from *Daleth*, and similarly with the rest. It may be objected that these are not the Hebrew letters, but their names, and that only the letters are given here of the Latin ones, and not their names. To this it may be replied that it is to be noted that as these Hebrew letters so compounded are not used in composition to form intelligible and significant speech, but only a simple part of them, so neither did the Latin have to make use of more. The Latins gave to their letters for names those of these simple parts which they employed, which are not *descriptive* but *significant*. We have used these terms *descriptive* and *significant* for greater clearness, calling those articulations *descriptive* that need more than one character to describe in writing the sound which they represent; and not *descriptive* but *significant* those articulations which are so simple as only to express a

single sound, and so to need only a single character to represent them. For though, strictly speaking, this sound is also descriptive, since it can be written down, yet we have need of these terms that we may be better understood. Thus we may say that the one is the name of a letter including different sounds, which being represented by their appropriate characters will form a word, and in so doing give the name of the letter ; while the other is a name so simple as not to need more than a single sound ; and this will not make a word, since a word is a conjunction and union of characters used as letters, in virtue of which there is produced an intelligible sound ; and a single one will not make a word, having nothing to be united with, and it will be therefore *significant*. And so we may say that the names of the letters of which we are writing are not descriptive as those of other languages ; since from the name *Aleph*, which is descriptive, the name of *A* has been separated, the whole of it being employed and included in the pronunciation of whatever is spoken or written ; and it is not descriptive, being a single complete sound which we could not if we tried represent by other simple and complete sounds ; since in joining two together (and there must be two at least) a compound sound will be produced, which cannot represent a simple one. So that by this character is to be understood the articulation more or less strongly uttered, not only in reading, but also in naming it. And thus the names of the Latin letters have been handed down only by tradition. And since these are the elementary parts of speech and writing, it is impossible to have parts more simple to represent them ; if there

were, *they* would be the letters and elements, and it would be necessary to have an explanation of these, and so it would go on *ad infinitum*. So that the choice the Latins made was to separate from the Hebrew letters the complete part with such perfection that nothing was wanting of the essence of each letter of which there could be any need. Nor did they take over anything which might have been discarded as superfluous ; but so completely and comprehensively did they do it, that they made the name and the sound inseparable, the whole essence of the letters being placed in the names they gave them. So that we may say not only are they complete, but each one in its nature possesses entire perfection, which exists only in that which can neither be added to nor taken from without losing its perfection, a thing which could not be said of any invented letters, but only of our Latin ones, which are written as they are spoken. And of all the nations that use them, no other possesses for its vernacular a language so perfect as to be written as it is spoken, like the Latin, except the Spanish. And although these Latin letters include those called consonants, having compound, descriptive names, it is an imperfection not inherent in them, but imposed by custom, tradition having deprived them, in the wish to render them more sonorous, of the original simplicity which they really possess, of which we shall treat more fully farther on.

CHAPTER IV.

If the Latin letters were not in imitation of the Hebrew, but were invented by the Greeks, which of the Greeks were the inventors, and what were the names they gave?

It would not be right to pass over in silence the opinion of many authors of weight as to the Greeks having invented the Latin letters; nor would it be just, if they performed that office for us, to deprive them of the honour of it, and show ourselves insensible of so great a benefit; besides that for our purpose the result is the same as if they had been taken from the Hebrew letters, should they have been on the contrary handed down from the Greeks to the Aboriginal inhabitants, as we shall describe in this chapter.

What we have already said, giving to the Latin letters a Hebrew and not a Greek origin, is in agreement with the passage quoted from St. Isidore, who, as well as other writers, in speaking of the letters *y* and *z*, says that they are Greek, from which it is to be inferred that the rest are not so, since their separation and distinction from the others implies that their origin is different. But without attempting to decide which of the two is the most probable, we will only consider, whatever their origin, the names that were primarily given to them. Now, the same Father in another passage says that the first to bring the letters to Italy was the nymph Carmenta, so called because in her verses (called in Latin *carmen*) she sang of future events; but her real name was Nicostrata, as is related by Blondus Flavius

in his work *De Roma triumphante*. And Dionysius of Halicarnassus makes mention of her in many places, and of her coming to Italy, saying that she was very wise, and that her divinations were held to be witchcraft, so that she went over to Italy, and lived among the Pelasgians (which is the same as the Greeks), and with the Aborigines, a barbarous race. And he says elsewhere that in the reign of Faunus in Italy, sixty years before Æneas arrived there, Evander, a native of Arcadia, son of Mercury and the nymph Carmenta, as they afterwards called Nicostrata, came over with her to Italy by her persuasion, and that she was held in great repute for her knowledge of letters and her gift of prophecy. And the same thing is related by Rufinus. Pliny also says that these Pelasgians brought the letters to Italy. And Thucydides, in his history of the wars between the Peloponnesians and the Athenians, says that until the time of Helenus, son of Deucalion, the Greeks were not called Hellenes (the name which they afterwards bore), nor was the whole country called Greece, but only a part of it ; for each nation and tribe had its own name, while the common title of all was Pelasgian. And their languages too were different ; with which Constantine Lascaris agrees, stating that there were the Ionic, Attic, Doric, Æolic, and the common tongue. So that all these writers agree in saying that the letters were brought over by the Greeks, whether it were by the Pelasgians or by Carmenta. And Priscian says the same in treating of the letters.

Looking at them in their true light, we hold, as we have said, that there are no more than eighteen Latin letters, *i.e.* sixteen older ones, from the Greek, and

f and *x* added on later, and also taken thence. The apparent contradiction in the passage from St. Isidore may be easily reconciled if we suppose that he did not mean that they were taken *directly* from the Hebrew, but primarily, and through the medium of the Greek letters, which were derived from the Phœnician. So Herodotus of Halicarnassus writes of the Phœnicians: "Those who came over to Greece with Cadmus, while they dwelt in that land, introduced there among the many arts which they brought with them the letters of the alphabet, which hitherto the natives had not possessed." And these words of Diodorus agree with this: "Those who say the Phœnicians gave the Greeks the letters which they had been taught by the Muses, meant that it was they who crossed over to Europe in company with Cadmus." And Berosus says also that Cadmus brought them from Phœnicia to Greece. Whence it must be concluded that the Greeks gave the letters the name of Phœnician, and this it seems must have been meant by Lucan in his verses: "The Phœnicians first, if report speak true, dared to make speech immortal by writing it in rude symbols." And Polydore Virgil quotes these lines to the same purpose, whence it is clear that the Greeks no more than the Latins took their letters direct from the Hebrew; so that we must understand St. Isidore to mean in the passage quoted that they were taken from the Hebrew *secondarily*, and through the medium of the others; but that they had it for their origin, just as we say all men are sons of Adam, who is our common parent. But whether it were the Pelasgian Greeks who came to Italy and dwelt in those regions which were afterwards called Latium, inhabited by the

Aborigines, a barbarous people to whom they taught the Latin letters, or whether it were Carmenta and her son Evander, we do not consider it needful to determine, since it tends in both cases to the same result—that unlearned nations received the letters from civilized ones. And although it is true that the Greeks held all nations (but their own) to be barbarous, this one we should gather from the knowledge we have of it to have been especially so, a conclusion which strengthens the argument of this work, and clears up a question which must not be avoided, as to why the Greeks who taught the letters did not give them their own; since for the three reasons of convenience, patriotism and renown, among many others that might be given, we should have expected them to give these and no others. Firstly, because they were the ones they were most accustomed to for the purpose of teaching, and those by which they could accomplish it with greater ease and less labour. Secondly, because the propagation of their own laws, rites, and customs is naturally desired by the natives of any country; so much so that one nation is called barbarous by another because it does not agree in these respects, each holding its own to be the best. Thirdly, and lastly, because it might be thought that while Greece was held in such high renown for the study of letters by all the world, her children thought unfavourably of her letters; since their making choice of others would seem to show some defect in those which they rejected, and some greater perfection in those which they preferred.

The greater stress we lay on this objection, the more its solution will aid our argument; for we are going on

the supposition that those who taught were learned, and the scholars uncivilized savages. And this being the case, the former would of necessity have to adapt themselves to the incapacity of the latter ; since it is a principle in teaching to seek the road that is the easiest by which to convey the instruction ; and although it may be at the cost of greater labour to the teacher, it lightens that of the scholar. And thus if the Greeks did not teach the characters in which they were well versed, and which they might have taught with less trouble, it was because there was not sufficient ability on the part of the learners ; and the necessity arose of either inventing new ones, or of adjusting their own to a form more adapted to the ignorance of these people. This they accomplished by giving as names to the letters the simple sounds which they used for them in speaking and reading, so that knowing these they might be able to read, as we have said in the previous chapter ; the only difference being that there we said it must be done by those who received the letters, here by those who taught them, making selections and omissions from the Greek letters, as we described before in speaking of the Hebrew ones ; since the same parts can be taken from *Alpha, Beta, Cappa, Delta*, leaving *A, B, C, D*, and so on with the others, though the Greek does not give the same value to the *B*, but that of the consonantal *V*. And not only did they pay attention to giving the letters such names that by pronouncing them together, with the necessary pauses between the words, they might be able to read, but also they gave such forms to the characters as to be a kind of portraiture so appropriate to the motions made by the lips, teeth and tongue in

pronouncing them, that the sight of them might serve for a demonstration and recollection, facilitating their formation, as will be shown of each letter in its place ; which helps, too, to make it clear that the Greeks who taught them sought by all the means in their power to facilitate the instruction. And so they invented a more ingenious system than has been arrived at in the case of any other letters, and the glory of it has been rightly attributed to Greece by tradition ; and we may say that all objections that may be made are now answered, without going over them one by one, since the one that has been dealt with covers them all.

And since we may have recourse to conjecture when proof is wanting, it may well be supposed that the land where the Aborigines dwelt was called Latium, and that hence they were called Latins, and the letters Latin ones, the name arising from their having been invented there, as it would have been taken from any other part where they might have been invented. And as in Latin *t* followed by *i* has the sound of *ci* when another vowel succeeds, but not when preceded by *s*, as *sapientia*, *oratio*, but *molestia*, *questio*, so there is little difference between Lacina's and Latinas, or between Lacinos and Latinos.

And they rendered the use of the letters so easy, and arranged them so well, that however rude the learners may have been, they could not fail to have understood them. And this is supported by what we see in Nature ; since the deaf-mute whom she has deprived of so much is able to understand the Latin letters and no others, unless by the medium of the names of these. And it is therefore clear that whether originally invented or

derived from others, or reduced to greater perfection, as we think to have been the case, the names which were given to the letters were those of simple sounds, and the compound ones they now have were the introduction of an unfortunate custom.

This is the result at which we have arrived as to the origin of the Latin letters, whether invented or imitated from others ; and as any attempt to settle what so many centuries have passed over without its being preserved by writing or tradition can be only conjecture, we shall relinquish the discussion ; while so long as no better is suggested, we may accept this conclusion, if causes may be deduced from effects.

CHAPTER V.

In which it is proved that the name of each letter is the sound of the articulation it represents.

RETURNING to what we said about the number of the letters, we have twenty-one different ones in use. And as such letters are symbols of the different articulate sounds, as we have said, and as the voice of the writer is absent, they represent this voice, supplying entirely the place which it would have taken. To make which clear it will be necessary to have recourse to our illustration taken from music, on account of its great similarity to the subject with which we are dealing. When a book or a piece of music is put into the hands of a musician, he knows by the notation the sounds intended, giving to each its own signification, just as if the writer sang them ; and by lowering or raising his voice he adjusts

it to the value of each note ; and joined together they produce the desired harmony.

So it is with letters in the hands of a reader. When he gives to each one its proper force and value, *i.e.* the articulation of which it is the symbol, these articulations joined together form the syllable, the spoken result of the different letters united ; for reading is nothing more than the reader showing that he knows by these symbols, as if they were portraits, the originals which they represent ; and the recognition of these and the naming of them continuously, compose words. And thus we cannot suppose that the inventors of these letters gave them any names, whether they invented or borrowed them, but the simple sounds of the articulations which they represented ; because to give them any other compound names would be to provide a false basis on which speech could not be built up ; especially since each letter is not significant by itself alone of anything but itself, in order to be combined with others. And thus in a definition of a letter by the ancient grammarian Maximus Vitorinus, he says that every letter contains three things—a name, a character and a value. By the name he understands not only the generic term by which every symbol is called a letter, but the special and particular name of each one, appropriate to and adapted to the sound it represents. The character is that which is given to each letter or symbol to delineate it, as the character A, given to the first letter of the alphabet ; but the form of character is not essential to the letter, but might be selected at will, provided only care were taken that the various symbols should differ from one another sufficiently to prevent confusion ; and these symbols

they called letters. The third thing is that they have a value, which is the foundation of our teaching. But though this writer gives these three attributes to the letter, he does not assign its full meaning to the value; since by it he means only the long and short quantity in verse, and does not touch on the more essential part of the value, which is the representation by it of the exact articulation for which it stands; so that whoever sees these symbols may put them into practice in order to understand the meaning of the writer. And this value which we see to be inherent in each letter, in order that we may use it aloud or mentally, can be neither more nor less than the articulation itself. For as speech is composed of a series of articulations, there must be, when it is written down, as many letters and as different as there are articulations; for if there were more or fewer letters, since each has a corresponding value in sound, they would be found by the original writer or any other to have a different sound, and therefore a different sense; just as when one is painting a portrait, if he adds or leaves out anything that is in his copy, he will render the portrait unlike the copy; for the same thing will happen in words which we read by means of written speech, that will not then resemble the sound which, as Quintilian says, the writer has enclosed within it. And thus we must agree either that all written language serves as hieroglyphics, by means of which we understand simply what we have learnt by custom, and not by the meaning of the letters, or that the names of the seventeen (consonants) are different, when written and when pronounced in combination, from those which we give them individually, and that we do not read by

means of their names. Or, in other words, each of them possesses two names, one of which we employ when it is used separately, and the other when in combination ; while there being, as we shall show, no necessity for more than one, we may discard the other, since it only produces confusion and difficulty.

The names, then, of these seventeen letters are not those which must have been originally given them, which were the same sounds as the articulations which they represent ; the reason being plain—that the inventors were not then seeking names to give to the characters, but characters to symbolize and distinguish the different sounds by which speech was formed ; and these sounds served them as names. And though Adam were the inventor of letters, yet speech was used by him first, as Nature is prior to Art. And thus it must needs be that they used symbols to represent sounds, and not that they devised sounds for the symbols. This is the opinion of Flaccus Alcuinus, teacher of grammar to the Emperor Charlemagne, who, writing about language, says that letters were invented on account of speech. And this being the case, since each character is formed by its absent sound, it would have been a remarkable defect had its own name, the very thing which it represented and for which it was used, not been adapted for what it had to represent. For (the sound which each letter has to symbolize and which should serve as its name being a simple one) there is no apparent reason why such name should be a compound one ; and this has been sufficiently demonstrated, since each letter simply had given for its name the sound for which it was used.

CHAPTER VI.

On the definition of voice.

THE name of each of the twenty-two letters is well known to us ; but we know it only as tradition has handed it down, because the names are elements which cannot be written down on account of their great simplicity. But we shall now proceed to distinguish them in such a way that they may be understood without being always dependent on tradition alone, as hitherto; by which the imperfection of the names they now bear will be seen, since they are of no value for teaching, but are rather a hindrance and delay in learning to read. And this is necessary because the matter possesses difficulties which are easily seen ; and it is necessary that all who read this work—and it is intended for all classes of readers—should fully comprehend it.

We shall first declare what is the nature of the letters, and show the fault which custom has introduced into ours, considering whether it should be allowed to remain or be remedied, basing our reasoning as much as possible upon argument, and upon that experience which is the soundest philosophy. We shall then simplify the classification of the letters which others have made, this being in agreement with our proposition, that by giving the least possible confusion we shall render our argument the more easily followed. And since the letters are formed by the aid of the voice, it will be necessary to treat somewhat, though briefly, of this. St. Isidore says that voice is air which, being expelled, causes its force to be perceived and heard, and that all voice is

either articulate or confused—articulate when it can be understood, confused when it cannot be written down. The same was said by Ælius Donatus, an ancient grammarian. And Dr. Juan Sanchez de Valdes, in his book entitled *The Chronicle of Mankind*, says that voice is a subtle pulsation of air, formed by the tip of the tongue. And Flaccus Alcuinus, replying to some questions of his disciples, said that there are four varieties of voice—articulate, inarticulate, comprehensible by letters and incomprehensible by them. Articulate voice is that which connects, pronounces, and declares anything which makes sense, as "I sing the deeds of the heroes;" inarticulate, that which has neither sense nor meaning, as the noise of something broken, a castanet, the lowing of an ox, or any similar thing. The comprehensible voice is, as has been said, that which can be written down, and the incomprehensible that which cannot. And although it might be considered that the comprehensible and incomprehensible voice might be included under the articulate or inarticulate classes, yet there is a distinction, inasmuch as there are forms of voice comprehensible by letters and yet not articulate, on account of their lacking sense and meaning. This is what is referred to by Priscian, in writing of the voice, when he distinguishes between "articulate" and "what can be written," proving that not all that can be written is articulate; for *cra* and *coax* and similar combinations can be written, but still are not articulate words, since they have no meaning. And therefore it seems that we shall be proceeding on a surer basis if we add to the definition of articulate the idea of being significant, since the perfection which these authors desire to

attribute to the voice consists in its being significant. And thus when we speak of the compound name of the letters, it is of the articulate, significant form that can be written down ; and when of the simple name, it is of the significant form, but which neither is articulate nor can be written down, except, as has been said, in the case of the vowels.

CHAPTER VII.

On the nature of the compound letters, and their names, and how they are used in reading.

THE names of the seventeen letters, *b, c, d, f, g, h, l, m, n, p, q, r, s, t, y, x, z*, which cause this confusion can be written down in this form—*be, ce, de, efe, ge, ache, ele, eme, ene, pe, qu, erre, ese, te, equis, ygriega, and yzeta* ; since by combining the characters with which they are written, they can be expressed with the voice. They are also articulate words, being entire units, substantive, intelligible, and significant ; since by their utterance the signification is known. And, moreover, they are all compound, and united, seven of them with a single vowel at the end, viz. *be, ce, de, ge, pe, qu, te* ; and the sound has the value of a single syllable. And the remaining ten have, as is clear, a fuller composition ; since the shortest have two syllables each, and the two last three syllables, because the vowel *y*, according to the grammarians who have classified the letters, is admitted as a syllable when it does not do duty as a consonant, which is the case here, since at the beginning of each word it has its full sound. Others give a

somewhat different nomenclature, as follows—*a, be, ce, de, e, ef, ge, ha, i, l, em, en, o, pe, qu, erre, es, t, v, x, ypsilon, zeta*. The difference is small, but it produces no small confusion when every one may alter the nomenclature as he thinks best. And this illustrates the effects of tradition upon the letters; for though some of the names of the letters are so similar as to differ from one another only in being more or less compound, it is incredible that any letter could have had more than one name given to it at its invention, but there must have been given one only; and this is immutable, and the best adapted to express what is intended.

The names of the letters then being written in this way, it must be noted that none of the names of these seventeen letters, which are the compound names that custom has bestowed on them, are ever made use of. Thus, taking the *e* as an example, it is never written so when combined with others to make sense, but simply with its own character, *f*. And just as here in writing the two *e*'s are dropped, both before and behind, so it is in speaking; since when it is used in speaking we never use the *e*, but only the simple sound; and the same with the other letters, so that these compound forms are neither used in speaking nor in writing. And we shall affirm in consequence that all the letters are employed in their simple and not in their compound form; for if *f*, in its form *e*, be joined with a vowel, as *i*, it will produce *efei*; but this is not the true pronunciation, which is *fi*. And if we also add this letter *n*, giving it its full form *ene*, the three united will produce *efeiene*; but using only the simple forms we shall have *fin*, which is the right pronunciation. Hence it was a

careless thing to make it possible by these compound names for the letters to lose the simplicity of their sound, and the triple agreement which made their invention the more brilliant, and in which respect our language is unrivalled—that is, the agreement between the sound of the articulation when we pronounce it, the special name of the letter which characterizes it, and the name we call it by when reading ; which are all three the same. And as there are no other letters that possess these qualities, ours alone are entitled to be called letters ; while the rest are properly only figures, and abbreviated hieroglyphics, which are to be read not by their visible values, but by the knowledge of their use, since the employment of their names in combination does not produce speech. While ours, omitting the compound parts that are not natural to them, but an incorrect addition, are not only well adapted for the purpose they serve, but are also perfect in their own virtue and essence ; as to which it will be necessary to say something of the definition that some authors give, in order that the innovation of changing their names may not cause so great surprise. And although the reasoning was not designed for the purpose of which we are treating, yet it will serve us for an argument to support our own proposition.

CHAPTER VIII.

That the definition of a letter given by the old grammarians must be understood of the simple form.

CONSTANTINE LASCARIS, in his *Compendium of Greek Grammar*, says that the letter is the smallest elementary

part of a word ; and the same is said by Asperius Junior in his work on Grammar. And Ælius Donatus, after having defined the word, as we have referred to in chap. vi., says, speaking of the definition of a letter, "The letter is the least part of the articulate word." And all these propositions are in harmony with our argument ; for if the essence of an articulate word consists in its being capable of expression in writing and in being significant, and the compound names which custom has given to these letters are capable of being expressed in writing and are significant, they cannot be letters, since letters are not words, but the least parts of words. That they can be expressed in writing we have demonstrated by writing their names as they are sounded. Moreover, they are significant, since we know and understand clearly by them that which they represent, namely, that they are the names of such and such a letter ; and being so expressible and significant, they are necessarily articulate, and that which is articulate, expressible in writing, and significant we must perforce call a word ; and if this can be divided into elements, any one of these, and in strictness the least one, will, according to the dictum of these authors, be a letter ; and in the case of these compound names, the division can be made into two, three, four, or five lesser parts, as with *efe*, *ache* and *equis*. And Flaccus Alcuinus has the same definition of a letter, viz. that it is indivisible, sentences being divided into parts of speech, these into syllables, the syllables into letters, and the letters have no divisions. And Sergius, the grammarian, says the same. Nor can there be any question of the dictum that the letter must have the

simple name, as we maintain, since it is indivisible. And if we are to suppose that these authors were speaking of the compound names, they have left us in a position to show by means of their own argument the truth of ours; since so long as we find anything to be taken away or subdivided, we have not arrived at the letter; for subdivision can take place, as we have said, in sentence, word and syllable, but not in letter. Hence none of these seventeen that we are speaking of can be properly called letters, inasmuch as they form complete syllables; but the term is applicable to the vowels alone, for though they have the value of a syllable, it is on account of their very simplicity, which renders them quite indivisible. Velius Longus gives, in his work on Latin orthography, the various definitions which authors have compiled of a letter, and he sums them up thus, saying that some hold the letter to be the element of clearly uttered speech, others that it is the basis of the significant word, others that it is the least part of speech, and others that it is the element of written speech; but all agree in rejecting the definition that it is the basis of the significant word, for words may be written which are in no way significant, as *tit*, *tir*, which can be written, but have no meaning. The truth is, however, that it is the element of any uttered word; and being the element of all words articulate and capable of expression in writing (which is one and the same thing), it will be the element of these compound names, for having these two characteristics, and being capable of division, their elements will be letters, and not the whole of them; and these elements will be simple sounds, as, for instance, in *tir*, the *t*, the *i*, and the *r*.

It follows from this that the name of each of these seventeen is a compound word, and therefore cannot be the name of a letter; but the primary parts of this word will be letters. Thus *be* is an articulate word, capable of being written down, and of subdivision into parts; and the initial part, *b*, will be a letter; but the sound of the whole is not that of a letter, but of a clear and expressible word. Priscian, indeed, refines upon this definition, saying that a letter is the symbol of an element, like a portrait of the written sound. And as it is the case that this word is composed of two or more letters, it is therefore no element, since composition has taken place, while an element is simple. And this author, following up his metaphor, still further says that the element differs from the letter, in that the former is a pronunciation, the latter a symbol; and it is indeed a great error to call the letters elements and the elements letters, for we might say that in one syllable an *r* cannot come before a *p*; but this is not true of the symbols, which may very well be so placed, but it is true of the pronunciation, and this makes the distinction clear. And we may well affirm, deducing it from these authorities of weight, that these marks, characters, symbols, or letters cannot have the compound names which custom has affixed to them, but only simple ones, like the elements that they represent and portray. And anyone who wishes to complete this argument may read Johannes Goropius Beca, in his *Hermatena*, and Marcian Capella, Terencianus Maurus, and Victorinus Afer. The two last are to be found in the first volume of *The Ancient Grammarians*, and Marcian Capella in his separate works; besides that they are

quoted by Justus Lipsius ; and they all write of the pronunciation of the letters with illustrative examples ; and though differing somewhat as to this, they all agree in giving simple names, as in the example of *m*, which is one of those that have a name compounded of two syllables—for Marcian Capella says that it is formed by the lips ; Terencianus, that it is a kind of murmur within the closed mouth ; Victorinus Afer, that it produces, the lips being mutually compressed, a certain murmuring within the cavity of the mouth, while the nostrils are contracted. Now it is clear that they did not say this of the two-syllabled word *eme*, which is not a murmuring, nor is it pronounced with closed mouth ; but it is said of the simple *m*, the two *e*'s being dropped. And it is therefore no innovation to give a simple name to the letters, but really a restoration of them to their original form and essence, which ought to have remained unchanged. And later on we shall write more fully on the pronunciation and formation of each letter than these authors do, and according to our Spanish pronunciation of them, since not all nations who use the Latin letters retain the same pronunciation.

CHAPTER IX.

The classes into which the ancient grammarians divide the letters, and those into which they should be divided in order to better understand this method of teaching.

As to the number of the letters authors are much at variance, some saying that there are sixteen Latin ones, considering the *h* as an aspiration merely, and the *k*, *x*, *y*,

and *z* as borrowed from the Greek, and only of use in words borrowed from the Greek ; while in the division into vowels, consonants, semi-vowels and mutes they do not mention the *y*, so that with the *k* there remain twenty-two, and the remaining seventeen they call consonants, when the five vowels, *a, e, i, o, u*, have been taken away ; and the two, *i* and *u*, are also reckoned among the consonants when they have lost their vowel force ; and these seventeen they divide into seven semi-vowels, *f, l, m, n, r, s, x* ; and of these they call the four, *l, m, n, r*, liquids ; and the nine, *b, c, d, g, h, k, p, q, t*, they call mutes. And since it is of no importance for our purpose to spend time in enquiring why they gave them these names, we shall pass it over in silence ; but any one desiring to see it will find it by reading Poncianus, Ælius Donatus, Servius Marius, Maximus Victorinus, and Terencianus, the old grammarians, besides others who have written on the subject ; but for our purpose we have to treat of the twenty-two letters in use, including the *h* and the *y*, and excluding the *k*, which we do not use, the *c* joined to the *a* having the same value, as is perceived by Ælius Donatus, Cledonius, and Maximus Victorinus. And thus we reduce them to this fixed number, and with no further classification than into the five vowels and the consonants, so called because they are sounded in combination with the vowels. And we deal with them in these two classes alone, because there is no need in teaching children to read, or in teaching the deaf to speak, to know what are semi-vowels, liquids, and mutes, though we do not, on this account, condemn their division in this way, but only remark that, for our present purpose,

it is unimportant, since our first object is to seek the plainest road, disengaging from it all that might cause confusion or hindrance. So that we are agreed to divide all the letters into vowels and consonants, of which the vowels are simple, the consonants compound ; and from the simple ones we learn the defect of the others ; so that we shall henceforth make them all simple like the vowels, which are simple in their use, while the consonants are not. Thus this word, *oia*, first and third persons singular of the past imperfect of the verb *oygo*, enjoys the whole value of its letters ; for if we consider it carefully we shall find that it consists of these three articulations alone when it is pronounced, and when it is written it is formed of three letters, each one having been given as a permanent symbol ; and it is clear that, whether pronounced separately or together, it is the same thing, since singly they give *o*, *i*, *a*, and pronounced rapidly they form *oia* ; so that by naming rapidly the separate letters the word is formed, though unintentionally, which is the highest perfection attainable by the wonderful invention of letters. And this arises from there having been given them for names the very articulations that they represent ; and these articulations being not compound but simple, they form, when so pronounced, the same word which is composed of their letters. The compound form of the consonants is quite unnecessary, since properly they should be simple as are the vowels ; and then, knowing the name of each, and pronouncing them quickly, we read the word correctly.

CHAPTER X.

*The reason why children are so long in learning to read ;
and a demonstration that the cause of their difficulty
lies in the names given to the letters by their teachers.*

WHEN children are taught these twenty-two letters, they learn seventeen of them by names which they are obliged to forget afterwards, or to take care not to use ; for when they are told to join them together, which is called spelling, it cannot be done, the foundation of all being false, since if *m* and *i* are joined together, their names will not form *mi*, as they are told, but *eme-i*. And the reason why boys are so long in learning so easy a thing is because some time is wasted in learning their names, and more in learning to discontinue their use ; and the one is no less difficult for them than the other : for not being old enough to express the difficulty they meet with, they only suffer from it, without appreciating the loss of time spent, before they are able to spell. And this they learn by a very circuitous process, and not by the value of the letters ; but as they will not have to learn to read by their means, there is no need to waste time in teaching the names. This word *oia* contains three letters, for its pronunciation consists of only three different sounds ; and if we give to each one the name which it has singly, we shall produce the word correctly, and the perfection of this word lies in the fact that all its letters are simple. So that whether naming their separate names one after another, or pronouncing them together as written, we produce the desired word ; and

this either mentally or aloud, and without having to learn it by any circuitous method or mnemonic, but simply by means of the value of the letters that compose it, and without the written letter contradicting the articulation for which it serves as symbol, as we have said before, nor the sound and symbol the name applied to each one separately. But in words formed of compound letters and vowels combined, as are almost all the words with which we write and speak, the sounds which belong to the letters when combined in words do not agree in their pronunciation nor in their written form with those we give them by themselves, as will be shown by the example of this word *Francisco*, which consists of nine different sounds, which being pronounced aloud in succession give this word; and the characters with which it is written are of the same value, and in the same order as the sounds they represent. But the *name* which custom has applied to each one does not agree, as they did in the word *oia*; since if we write down or pronounce mentally the names of these nine letters in succession, as we did in the case of the word *oia*, we do not obtain Francisco; for the names of the nine letters are these, *e*, *f*, *e*, *r*, *a*, *e*, *n*, *e*, *c*, *e*, *s*, *e*, *c*, *e*, *o*, and joined together they make *efeereaeeneceieseceo*, an unintelligible word. And while there is no *e* in Francisco, we find here ten introduced; whence we may perceive how great is the fault which we retain without any corresponding benefit, while we continue to erect obstacles where there are none, and to deprive the letters of our alphabet of the greatest excellence they possess.

CHAPTER XI.

Another definition of the letter, which describes its use.

TRADITION gave compound names to these letters on account of their extreme simplicity, seeking to make them distinct by giving them an equal sound, so to speak, with the vowels to which they joined them ; and people were prompted to this by imagining that learning would be rendered easier by the introduction of clearer and more sonorous names, which the memory might retain better through their being more comprehensible : the consequence being, that it was impossible to teach quickly, since after learning the names it was not possible to go on by their means towards reading, which consists in joining the names together so as to express by them the intended sense. And this explains another definition of a letter which describes its use, as given by St. Isidore, Pedro Gregorio Tolosano, Diomedes, Priscian, Sergius, Cledonius the Roman Senator, Flaccus Alcuinus and Victorinus Maurus, as follows :—"A letter is so called from being *ligitera*, because it, so to speak, shows a way to read to those who are learning ;" assuming that the word is compounded of the Latin words *lego* (read), and *iter* (way), thus meaning that which shows the learner a way to read. And, indeed, if the names of the letters be simple, as we have said, it is a path to reading, as our example of the word *oia* shows, but if the same names be compound, it cannot be a way to read intelligibly, as is shown by the word *Francisco*. And if anyone should think it must be a disadvantage for the letters

to have such simple names, we may reply that all things have some advantage if we look for it and not for the disadvantage, and in this case it is clear that none of these letters being used by themselves, they have no need of sonorous names, which are necessary for the vowels alone, since we use their names separately, and, moreover, they are significant each one by itself, as, "*llama a Pedro, Juan, y Francisco; esto è aquello,*" and the *e* and *u* (*v*) are used to supply the place of *i* and *o*, the latter especially when two *o*'s or two *i*'s have to be joined, as "*plata v. oro;*" and the *e* serves the same purpose as the conjunction *i*. And this is stated also by the Licentiate Sebastian de Covarrubias, in treating of the letter *o* in his "Thesaurus" of the Spanish language, although at the present time its use in this way is discontinued. But in earlier writings it is used again and again, and always in a way in which the authors never use the other seventeen consonants by themselves. And thus there is no need either in our language or in Italian to give them names, nor is there any advantage in making them sonorous, especially since by being so they acquire the inconvenience already described; while without it they render reading capable of being learnt in twelve days or even less, and afford an immense boon to the deaf. And this, too, has the support of nature, the best possible argument in its favour; for the deaf-mute, who represents nature at fault, receives by the eyes the names of the letters just as we do by the ears; so that the simple letters are perfect in that they allow one sense to supply the place of another, and nature is satisfied, as she cannot be by the compound names; for though it is possible to

teach these to the deaf-mute, being short and pronounced without any great motions of the mouth, yet when it comes to joining them together it cannot be made clear to him what part is to be made use of and what part is to be rejected, and thus he will not pronounce anything intelligible. But for the sake of those who do not approve of this change in the names of the letters, though their opinion will be found to be unsound, we may remark that they must at least agree that for teaching to read it would be convenient to give the simple names to the letters, and not the compound ones, since he who knows the simple names knows how to read.

CHAPTER XII.

How to teach the simplification of the compound names into simple ones.

WE have now to teach children with the same alphabet as that hitherto used; and in the case of the five vowels the names, as has been said, are not to be changed, since they have always kept their simple names; but the seventeen *b, c, d, f, g, h, l, m, n, p, q, r, s, t, x, y, z*, have to be deprived of their superfluous parts, reducing them thus to the simple sounds which are to serve them for names, by taking away the vowel or vowels which are joined to them. And to take an example for the sake of greater clearness, we must consider that the name which this letter, *b*, holds at the present time is to be written in this form, *be*, since its name is a compound of the sound signified by this character *b*,

with that of the *e*, and since it is to be made simple, it must be done by taking away the need of writing the *e*, by not pronouncing it.*

And if anyone should think this sound to be indivisible, he may make experiment with this letter, *be*, first pronouncing it with these two characters as written, and if then he pronounce it, slurring over the *b*, thus, *be*, he will pronounce the *e* alone. Then changing the process, and pronouncing it *be*, slurring over the *e*, so that the articulation is cut short at the *b*, the simple name alone will be gently pronounced. Then passing to the still more compound letters, *f*, *h*, *l*, *m*, *n*, *r*, *s*, *x*, *y*, *z*, the demonstration of the *f* will serve for all the others, its written name being *efe*, from which we must drop, both in speaking and writing, the vowel with which it is doubly compounded; thus eliding the first and retaining the last, it will be pronounced *efe*, and reversing the process, *efe*; so that in turn both *e*'s have been left out, and quite independently; and now what has been done in two processes has to be done in one—that is, to elide them both, *efe*, and this remaining sound without either of the two *e*'s, will be the name of this letter *f*; and similarly with the others. It may perhaps be argued that while it may be possible to detach it from one or other of the two without causing any great difficulty, yet disunited from both it cannot be pronounced without their aid, however lightly used; and that the same will take place with the other letters. But

* When a letter is printed in Roman type joined to italics, it is to be considered as mute.

this is a difficulty which needs to be sought for, and one which does not naturally present itself. In answer to it we shall call attention to the undeniable fact that it is more possible to divide the greater than the less, and this being so we have many words of great length in German, English and Arabic, whose pronunciation we cannot reduce to the sounds of our alphabet; but if we cannot recognize in so large a thing, the distinct sound of any one of our letters, how much more may the least part of a word, *i.e.* a letter, be pronounced without any resemblance to the pronunciation of any other letter, particularly if it be spoken with care?

But we may add, and it will supplement our argument, that though the pronunciation of the letter is not absolutely free from the sound of a vowel at the end, this should not present any great difficulty, so long as it is not before the letter, as may be understood from the case of this letter *e**f*e—for if it had to be pronounced with the accompaniment of one of the two *e*'s, it should be with the latter, and not the former; and the little sound that has to be made should be by pronouncing it *f*e, rather than *e*f, and the same with the other letters. The reason of this is that when any letter is pronounced separately, unless care is taken in ending the sound, the speaker will form at the end a slight vowel sound, since the part of the respiration remaining after the formation of the letter is sufficient to emit a sound while expiring—which sound, though slight, may be compared to a vowel, and will resemble that which would be uttered with the mouth in the position it retains at the end of the articulation, for it is that

which produces the difference in the vowels. But this fault is avoided when the letter is pronounced in combination with others, inasmuch as this part of the respiration is then not emitted freely, swiftly, and forcibly enough to form at the opening of the mouth any sound resembling a vowel, since it is absorbed in the formation of the following letters, without anything remaining but an ineffective expiration. And if anyone desires to experiment on this for the sake of curiosity, he may do so by taking any of the seventeen letters in use ; as, for instance, the *p*, which is one of those apparently most difficult to be pronounced alone, without the supervention of a vowel, because the danger of this is the greatest in all those letters where, at the end of the articulation, there remains a strong breath at the opening of the mouth ; and the *p* is one of these.

Moreover, by noticing at the termination of the sound in what position the mouth is, we shall discover that if it be widely opened as when the *a* is pronounced, the resulting sound at the end of *p* will be that of *a*, and this will be the case in the positions for the other vowels.

To test whether the remaining breath has in reality the effect described when a consonant is uttered by itself, and not when uttered in combination with others, we may try the experiment of placing the palm of the hand before the mouth, and pronouncing the *p*, taking care to dissociate it from the *e* with which its name is sounded ; and so long as the breath reaches the palm, moving the hand little by little away until it becomes insensible, and this will show how far the respiration reaches which is left after the emission of

the *p*, with the sound, however slight, of the *e*. But if the hand be kept in the same position, and a syllable commencing with this letter be pronounced, such as *pes*, it will clearly be felt that the breath does not now continue to beat upon the palm as before, which may be approached nearer to the mouth until we perceive it—and this will be at a much less distance than before, and it will have no greater force than that of the single expiration; only we must take care to pronounce the syllable with the same force that we pronounced the *p*: because if one be uttered more loudly than the other it renders the result untrustworthy. So that we learn from this experiment that, in forming this letter alone, there remains sufficient breath to form a vowel sound, slightly, though involuntarily, uttered; but when conjoined with other sounds it does not do so, because the expiration does not take place until the completion of the whole syllable, and when it comes it is so gentle that it has not force enough to produce a sound, in whatever position the mouth may be. The illustration is the same if we consider a syllable ending in a letter that is very sonorous, as *pal*; the *l* is very difficult to pronounce by itself without uniting with it a final *e*, but combined with the others, even though it be the last letter of a syllable, it does not produce a vowel sound, because all the breath has been exhausted in the utterance of the three letters *p*, *a*, *l*; and there is no tendency with either the *p* or the *l* to unite an active residuum with any vowel sound, though if we try to pronounce either of them alone we shall sound the *e* somewhat. This vowel is not sufficient, however, to prevent the sound of the letter from uniting in

sequence with another sound ; but rather the very breathing which, if supervening from the one letter by itself, would cause a fault, forms the material for the succeeding sounds, when the letter is followed by others. This fault does not exist in the vowels, for the breath which remains is not a different species of sound, but the same, in the form of a slight resonance which joins with the vowel sound to strengthen it, when necessary ; and as it is merely a repetition of the same sound it is clear that there is no part of the whole which is not represented by the name of the letter.

If this subject shall seem to have been treated with some discursiveness, it may be excused from its being one not commonly dealt with, but rather an unusual and subtle point, as is insisted upon by Pedro de la Primaudie, a French author, who writes in his *Académie-Française* : "The place which is held by speech, of which we propose to treat briefly, is truly of great importance among the secrets of nature, well deserving that in contemplating it we should be filled with admiration and rapture at the work of its inventor. Philosophers, diligent in searching out the causes of all things, have said that speech is produced by air that is struck, which gives an articulate sound : but the way in which speech is produced is very difficult for the human mind to comprehend."

So that we shall have the sanction of this author, since all that we have said has been to explain this subject of the formation of speech, with the intention of making it understood as far as possible. And though for many learned people it might have been done more succinctly, yet for the greater number there is need

of this explanation, and even more ; and, indeed, the safest plan is to write so that the ignorant may understand, and it follows then that the learned will also. But the reverse will not be the case.

And since, as we said at the beginning, our knowledge of the letters does not now depend on tradition alone, which allows their names to be changed, we shall proceed to describe them all ; and the descriptions are the basis of our method by which it becomes possible to teach the deaf to speak. And with the description of each letter will be given the reason which induced the selection of these characters for the letters rather than any others, as we promised before ; and also the signification which each letter had in Latin, and the numeral which it represented.

ENUMERATION OF THE SIMPLE LETTERS,


WITH DEMONSTRATIONS OF EACH, BY MEANS OF THE MOUTH, AND THE REASON WHY THE EXISTING FORM OF CHARACTER WAS GIVEN THEM RATHER THAN ANY OTHER ; AND THE ABBREVIATIONS AND NUMBERS WHICH EACH LETTER REPRESENTS IN THE LATIN AND SPANISH LANGUAGES.

CHAPTER XIII.

On A.

THIS letter, *A*, the first of our alphabet, is the same as the Hebrew Aleph, the Greek Alpha ; in Chaldean and Samaritan it is called Aleph or Alephe ; by the Arabs and Turks, Aliph ; by the Egyptians, Atomos ; by the Indians, Alepho ; by the Armenians, Aip ; by the Phœnicians,

Alioz ; by the Assyrians, Aluz ; by the Sclavonians, As ; and, in fine, all begin with this vocal articulation, *A*, and all agree also in giving it the first place in the order of the alphabet, as we do in ours. But with the other letters they do not retain the same order, nor is it essential to do so. The Hebrew ends the alphabet with *T*, which is called Tau, and the Greek with *Ω*, called Omega—that is long *O*, because there was another short one in use. All these alphabets agree as little in the number of letters, only agreeing in beginning with this one, while in none of these languages is its name simple as it is in ours, but in all of them there is a compound part after the *A*. The reason why this enjoys the priority over the other letters is on account of being the most easily pronounced, and because it is the first sound used by man at his birth, and is the initial of the name of the first man.

This letter is pronounced by keeping the tongue, lips, and teeth still, allowing the voice to go out freely, without being aided by any motion. And if the forms of the characters were given, as we have said before, not by chance, but with the desire to retain some system, it would appear to have been the aim to obtain some similarity to the figures produced by the mouth, lips, teeth and tongue, in pronouncing the sound which this character represents. And thus, as the *A* requires for its pronunciation that the mouth should be widely open, and that it should be uttered with the greatest force of expiration, they gave it this figure representing a trumpet, , the open part signifying the mouth, and the end of the two lines meeting at a point, the throat whence arises this voice ; and the little line crossing

the cavity appears to show that it is not to be closed. And though, with some of the letters, the system would be more complete if they were laid down like the preceding one, they are all used upright, to keep in proportion with the others. It would appear that Julius Cæsar Scaliger is in accord with this opinion, when, in his work on the origin of the Latin language, he seeks to show that the derivation of the word *letter* is not from *iter legendum*, as is held by St. Isidore and by the ancient grammarians, but from *liniatura*; meaning to affirm that these letters are all formed of lines, and thus from *linea* is derived *litera*. And if we were speaking of the Latin letters only this argument might appear to be a sound one, but if we are thinking of letters in general we include the original parent ones of all, that is to say the Hebrew; and none can have less claim to be called linear—for although strictly a line may be circular, obtuse, curved, or otherwise, yet when we speak of *lines* we understand only right lines, and there is hardly a straight line in the Hebrew letters, unless it were said originally of the first letters they had, which must have differed from the later ones, as may be concluded from these words of St. Hieronymus: ‘It is certain that Ezra the scribe and teacher of the law, after the Captivity and the rebuilding of the Temple under the authority of Zerubbabel, invented new letters, which are those used at the present time; while, moreover, it was the case that the characters of the Hebrew and the Samaritan were the same.’

This letter A., with the punctuation, according to what is written by Marius Valerius, Probus, Manionius, Petrus Diaconus, Papias, Glosarius, the ancient grammarians,

and Francisco Alluno Ferrares in his "Riches of the Italian Language," writing upon Boccaccio, signifies in Latin and in its numeration as follows:—*Augustus, Aulus, ager*, etc., etc.

A with a line above it, thus, \bar{A} , means *aut, ager*, etc., etc.

A. A. = *Augustalis, Augusti, Augusta, apud agrum, vel aurum argentum*.

A. A. C. = *ante auditam causam*.

A. A. A. = *aere argento auro, Augusto*.

In numeration it represents five hundred (500), and with the line above it \bar{A} , it signifies 5,000.

CHAPTER XIV.

On B.

THIS letter, *B*, is the first of those to which custom has given the compound names, and which are called consonants; the true name is that produced by a sonorous breath when the lips, having been closed, are opened slightly to give it passage, and its sound is uttered outside the mouth; the form of the character *B* was given it with no less reason than in the case of *A*; for these two semi-circles lightly joined in the middle of the perpendicular line represent the lips set together.

This letter, *B*, signifies *Balbus, bonus, bona, beatus, Brutus, Balnea*.

\bar{B} . = *Balbus, Balbius, bene, bona, bonæ*, and also with another mark, *bustum*.

BB. = *bonorum*.

In the Latin numeration it represents 300, and with the line over it, 3,000.

CHAPTER XV.

On C.

THIS letter, C, is used for two distinct sounds, like the G; before *a*, *o*, and *u*, it has a guttural sound, unlike that before *e* and *i*; as in *calor*, *color*, *cuchillo*. This sound is formed by interrupting the breath at the top of the palate, the mouth being slightly opened, and the breath not expelled but allowed to go out at will; the tongue, being drawn in, remains retracted, is a little arched, and with the arched part touches the palate far back, and so gently as to be almost insensible; as may be well exemplified in the word *hinc*. The sound which it has before *e* and *i* is entirely different; being formed by touching the lower teeth with the tongue, when, by driving out the breath with some force, a slight and gentle lisping is produced.

And since the first of these two sounds is much more common than the second, and since it is used with three of the five vowels, and the other with only two, as we have said; and also as the Greek language makes no use of the second sound, but only of the *k*, which is the first; and as some ancient grammarians would omit the *Q*, saying that *cu* is the same thing, whence it is to be supposed they are speaking of its sound before *a*, *o*, and *u*;—for all these reasons, which show that the first sound, and not the second, is held by all to be the principal and usual part, it is necessary that the character of this letter which has, like the others, to bear a representative form, should portray that articulation which is most generally in use, that is to say the first.

And thus, since to pronounce this the mouth is kept half opened, and the breath does not go out uninterruptedly, but is intercepted, as has been said, in the palate, it resembles the upper part of the semi-circle of this letter C, in the concavity of which (representing the mouth) is distributed the breath that sounds within it.

C. signifies *Caius*, *centum*, *cum*, etc., etc.

C ? = *cuius*.

C^a = *cornibus*.

C. C. = *consilium cœpit* vel *cessit*, vel *causa cognita*, vel *calumniæ causa*, vel *causa conventa*, vel *Caius Caii*, vel *circum*.

C. C. C. = *censa civium capita*, vel *Cai coloni clarissimi*.

In the Latin numeration it represents 100; and with the line above it, 100,000; and in the Spanish numeration, 100.

CHAPTER XVI.

On D.

THIS letter, *D*, has for its name the sound made by the breath when the tip of the tongue is pressed against the upper teeth, and the breath strikes against the same place, without forcing this expiration to go out of the mouth, but only to explode within it; for if it be driven out with force the *e* will be pronounced also, and there will be a double sound; and therefore it seems the tongue is pressed on the gums as well as on the upper teeth, to seal up the mouth and prevent the breath from

coming out, so as to produce a kind of resonance in the whole of the head. The form of the letter represents the figure of the tongue arching itself within the mouth, in the same way as the curve of the *D*, and the absence of a sign to show where the breath can come out indicates that the mouth is kept shut.

The meaning of this letter *D*. is, *Divus*, *diva*, *Decius*, etc., etc.

D ? = *dixit*, *ducit*, etc.

Ḑ. D. = *dedicarunt* or *dedicaverunt*, etc., etc.

D. D. = *dedicamus* or *dedicaverunt*.

D ? *D* ? = *dandum* or *dandas*.

D. D. D. = *dono dederunt*, or *dedere*, etc., etc.

D. D. D. D. = *dignum Deo donum dicavit*, or *decreto decuriones dederunt*.

In the Latin numeration it signifies 500, and with the line over it, 500,000. In Spanish it signifies 500.

CHAPTER XVII.

On *E*.

THIS letter, *E*, is the second of the vowels, and has for its name the sound of an expiration which goes out freely without any motion of the tongue to modify it, and is a kind of sigh emitted by the breast as if a sigh of relief. Its sound is formed in the throat, and the lips and mouth are drawn in, just as though, when it is desired to make a louder sound, it were necessary to fold in the sides of the mouth, on the ground that by so doing the concavity will be reduced, and the sound of the articula-

tion will not be lost within it. The form of the letter shows this, since the small median line, which represents the expiration, does not protrude from the middle, but is just equal to those between which it lies, and which represent the lips.

E. signifies *edit, edas, edendum, ede, etiam, est, ex, ea.*

E = *est.*

E ? = *eius.*

E. E. = *esse ex edicto.*

ĒĒ = *esse.*

In the Latin numeration it is equivalent to 250; and with the line over it, to 250,000.

CHAPTER XVIII.

On F.

THIS letter, *F*, has for its name an articulation produced outside the mouth, the breath being expelled, the upper teeth held upon the lower lip, the upper lip visibly protruded to some extent, and the teeth covering the lower one, which is therefore hidden; so that in the figure of the *F* it is not shown, but only the upper one.

F. signifies *Fulvius, Februarius, etc., etc.*

F ? = *fit*, or sometimes *fur*.

F. F. = *fefelerunt*, or *fabricaverunt, etc., etc.*

F ? F ? = *fidem fecit*, or *filius familias* or *fratris filius*.

F. F. F. = *ferro flamma fame*, or *fortior fortuna fato*, or *Flavi filius fecit*.

In Latin numeration it represents 40, and with the line above it, 40,000.

CHAPTER XIX.

On G.

THIS letter, *G*, has two different sounds: before *a*, *o*, *u*, it is a harsh guttural; before *e* and *i* it is softer, though some consider the former the softer sound. The form of the character represents the more general sound, which is the first, and which gives it its name. We shall therefore term this sound a guttural or throat articulation, formed when the tongue is curved upwards and applied to the top of the palate in the middle; and the sound is made in the same place, only a little farther back, as in the *C*, and produces a similar resonance in the ears. The lower jaw is raised a little, which supplies the distinction from the symbol *C*, which it appears to resemble in other respects. Thus Victorinus says that the two letters are very similar in sound; and being so in that, they must necessarily resemble one another very much in the form assumed by the mouth in the pronunciation of their names. And thus they are the same in the form of their symbols, the only difference lying in that part which indicates, in the *G*, the slight elevation of the jaw.

The second sound is much softer than the first; to pronounce it the tongue is curved nearer the tip than in the other, touching the palate with the curved part, pressing against it more firmly and more forward than in that, without producing any resonance in the ears, but rather causing the sound to go out of the mouth.

G. signifies *Gaudium*, *genus*, *genio*, etc., etc.

G ? = *gens*, *genus*.

G. G. = *gesserunt*.

In the Latin numeration it means 400, and with the line above it, 400,000.

CHAPTER XX.

On H.

ALL the Latin writers call this letter, *H*, an aspiration, a letter which has no value by itself, but aids and accompanies the others. And it is to be noted that we have called all the consonants articulations; but besides the difference in the simplicity and lightness of the respiration, this letter differs from them in the cause of not being sonorous. For if anyone try to give to the others a louder sound he will not be able, since in their pronunciation the breath does not pass out freely as in the vowels, being intercepted by the tongue, teeth and lips; but this is not the reason why *this* letter is not sonorous, for it is free from interruption. But if we make the position of the mouth for the pronunciation of this sound, *A* will be pronounced; but when there is no voice it resolves itself into a sort of articulation so silent that it is only a slight aspiration, which is the name of this letter. And its character is in every way appropriate; since if placed in its natural position thus, **И**, it evidently shows that it differs from **◀** in not being sonorous, for that cannot be sonorous which is open at both ends equally; for the one is in the form of a trumpet which produces a sound, but the other is open

at both ends so as to give none. And the line crossing the space is for the same purpose, to indicate that the mouth is not to be closed, any more than in the *A*.

H. signifies, in Latin, *Honestas*, *honestus*, etc., etc.

\bar{H} . = *hora*, *honestus*, etc., etc.

H ? = *habet*, *huius*.

H' = *hæc*.

\bar{H} . \bar{H} . = *hæredes*.

In Latin numeration it represents 200, and with the line above, 200,000.

CHAPTER XXI.

On I.

THE letter *I* is the third of the vowels, and has a sonorous articulation, simple and significant, as in the case of the rest; its name is that formed by a breath which issues straight outwards above the tongue which is raised and held on a level with the teeth, against which the breath strikes, producing a vibration, and going out through the half-closed jaws; and this is represented in the form of the letter, which is a straight line, —, because the breath goes straight out close to the tongue, and so much compressed that the teeth hardly give it room to go out, whence it is represented by this narrow line.

I. signifies *Iulius*, *Iulii*, etc., etc.

I ? = *intra*.

I. I. = *ibi*, *inibi*, *injustis*.


I. I. I. = *iudicavit*, *iudicia*.

In Latin numeration it means 1, and with the line over it, 1,000.

CHAPTER XXII.

On L.

THIS letter, *L*, has for its name the articulation produced by applying the tongue to the top of the palate in the middle, with the lower part of the tongue, the hinder third of it, arched inwards. The breath does not, however, rise up so as to strike at once against the palate; but, striking against the hinder arched part of the tongue, it finds its way out by the two sides.

Two reasons may be given for the form of character belonging to this letter. The one, that it depicts the action of the tongue, which is raised from the middle, in forming the *L*, thus, ; and for our method of writing from left to right, contrary to that of Latin and Arabic, it was reversed into the position of *L*. The second reason that may be given is, that although the tongue is raised so as to press against the palate, the lower part of the breath attempts to find an exit, and does so close to the lower teeth; and it is this which is indicated by the lower line, the perpendicular line representing the tongue in its raised position.

L. signifies *Lucius*, *Lucia*, etc., etc.

L. L. = *Lelius*, *legibus*, etc., etc.

L. L. L. = *Lucii liberti locus*, or *lacerat lacertum largii*.

In Latin numeration it represents 50, and with the line over it, 50,000. In Spanish it means 50.

CHAPTER XXIII.

On M.

THIS letter is the most silent of all the alphabet, having no sound beyond that which re-echoes within the cavity of the closed mouth, the lips being pressed tightly together. Thus Justus Lipsius, as quoted by Marcianus Capella and Victorinus Afer, says that by compressing the lips there is formed a kind of rumbling within the mouth, the breath going out by the nostrils; and the name of the letter is an articulation of this nature.

The form of the symbol is descriptive of the action of the sound in mounting up to the head and descending by the nostril; and though pronounced with so much brevity it is clear that the course taken by the sound is a double one, as is seen from the N, which also goes up and down like it, but is half as short in pronunciation, wherefore it is not doubled; or it might be held that this figure was given it to indicate the length of its sound, representing the breath by a long line, —————, which was, on account of its great length doubled up so as to be of the same size as the other letters.

M. signifies *Marcus, miles*, etc., etc.

M? = *mihi, minucius*.

M°. = *modo*.

\overline{M} = *malitiæ*.

M. M. = *milites, memoria, monumenti*, etc.

In Latin numeration it is equivalent to 1,000, and with the line above it, to 1,000,000. In Spanish it means 1,000.

CHAPTER XXIV.

On N.

THIS letter, *N*, has for its name a mute articulation, though not so silent as *M*. It is formed by placing the tongue against the palate, the tip being turned upwards, the mouth also re-echoing, although not closed, (the breath issuing by the nostrils), and yet only so far opened that the teeth and lips are unclosed; the sound is not so extended as that of the *M*, nor doubled as that is, but simple; thus its symbol is in accord with the nature of the letter, being the half of the *M*, partly on account of the breath going up into the head and descending by the nostril, partly because it is a shorter sound, —, and therefore less bent when drawn together; and further the last line which turns upwards and may seem to be superfluous may represent the tongue raised for the formation of this sound, and touching the palate with its tip.

N. signifies *Nonius*, *non*, *nam*, etc., etc.

N̄. = *non, numerum*, etc.

N ? = *noscitur*, *natus*, *nisi*, *noster*.

N. N. = *non enim*.

In Latin numeration it means 90. And with the line over it, 90,000.

CHAPTER XXV.

On O.

THIS letter, *O*, the fourth of the vowels, has for its name the sound produced by the free emission of the

breath with no motion of the tongue, which is previously withdrawn so that the breath does not strike against it. The mouth assumes the exact form of an *O*, formed by the slight protrusion of the lips, causing the jaws to be retracted. The form of the character is taken from this rounded form of the lips.

O. signifies *olius*, *optimo*, etc., etc.

O ? = *ostendit*.

O. O. = *ornamentis omnibus*, etc., etc.

In Latin numeration it represents 11, and with the line over it, 11,000.

CHAPTER XXVI.

On P.

THIS letter, *P*, has for its name the sound caused by a breath very like the *B*, differing from it in that the latter, as was said in its place, has the lips slightly open to allow the breath to go out gently, while in this it is retained in the mouth and then expelled with violence, apparently opening the lips by force, which by being closed prevented it from going out freely; and because the breath is here driven out closer to the lower part of the mouth than the upper, they gave it the form of the *P*, retaining the two out of the three parts of the *B*, adhering to the principle that all those parts that are in any way employed in the articulation should appear in the figure of the letter.

P. signifies *Publius*, *publicus*, etc., etc.

P ? = *post*, *pax*.

P. P. = *perpetua*, *proposita*, etc., etc.

P. P. P. = *primus pater patriæ* ; or, *pater patriæ proconsul*.

P. P. P. P. = *primus pater patriæ profectus*.

In Latin numeration it means 400, and with the line over it, 400,000.

CHAPTER XXVII.

On Q.

THIS letter, *Q*, has for its name the sound produced by combining *C* and *U*, and many authors hold it to be superfluous, inasmuch as everything for which it is employed may be performed by these two letters of which it is composed. And Quintilian writes *cuos* for *quos*, and Velius Longus *cuis* for *quis*, and thus it has not a simple sound like the others ; but it is never joined with either vowel or consonant without the interposition of the *U*. The articulation of this sound consists of two parts : the guttural *C*, sounded as with *ca*, *co*, *cu*, which we need not explain further, as it has been fully described above ; and the *U*, which is also treated of in its own place. It is no wonder that this character should not agree in its form with the formation of the sound, as it departs from the simple nature which the others possess, while it also seems natural that, its name being composed of two letters, the form of the character ought to be so also, but so combined as to appear one ; and the two combined together form this CV. But in order that the union should be so perfect as only to show a single character, it could not be better abbreviated than in this way, *Q* ; the part

representing the C closing up the V, which is also rounded off to complete the whole.

Q. signifies *Quintus*, *quæ*, etc., etc.

\bar{Q} = *quærendum*, *quatenus*.

Q^o = *quo*.

Q Q = *Quinquennalis*.

In Latin numeration it means 500, and with the line above, 500,000.

CHAPTER XXVIII.

On R.

THE name of this letter is the sound of a sonorous breathing, the point of the tongue being pressed upon the palate in the middle, with the tip turned inwards; the breath is so expelled as to strike the tongue and the palate at the same point with enough force to cause a vibration of the tongue. The reason why this form was given to the written letter is, that the sound is formed in the hollow of the upper part of the mouth in the middle, and this is shown in the symbol, which is closed above, as in the P, but open below, with the oblique line to show that the breath is to be expelled with a considerable fall, and with the vibration that was produced in the palate.

R. signifies *Roma*, *Romana*, etc., etc.

\bar{R} . = *res*, *rem*.

$R^?$ = *responsum*, etc.

R. R. = *rejectis rudribus*.

R. R. R. = *rurum Romanorum*, or *regnum Romæ ruit*.

In Latin numeration it represents 80, and with the line above it, 80,000.

CHAPTER XXIX.

On S.

THIS letter, S, has for its name the sound of a very gentle and low hissing, formed by a slight expiration with the tip of the tongue touching the commencement of the upper gums, and to some extent the teeth. The form of this letter was not given it as appropriate to the action of the mouth, but as resembling the creature which is wont to express itself by hissing; that is to say, the snake, the figure of which was therefore bestowed upon this letter.

S. signifies *Senatus, sacellum*, etc., etc.

S. S. = *sanctissimus*.

SS. = *suprascriptus*, or *sine sensu*.

S. S. S. = *sancto Silvano sacrum*; or, *supra scriptæ summæ*.

S. S. S. S. = *sancto sanctissimo sacrum*.

In Latin numeration it signifies 70, and with the line above it, 70,000.

CHAPTER XXX.

On T.

THIS letter, T, is so much like D in its sound and in the motions which produce it that Victorinus treats of the two together, though so far removed from one another in the order of the alphabet; they differ in that while the tongue is in the same place for both, the D is sounded within the mouth, because the tongue does not

move away to allow the breath to go out, as in the case of *T*, where the force of the expiration separates the tongue from the teeth, so that it makes its way between the teeth, and also separates the lips so as to leave no hindrance to its exit. There is a difference in the forms of these two letters, corresponding to the difference in the motions of the mouth in the two ; for in the *T*, the separation of the tongue from its place is represented by the half-circle of the *D* being broken and separated, and turned upwards.

T. signifies *Titus*, *Titius*, etc., etc.

T ? = *ter*, *tum*, *trans*.

T. T. = *Titus*, *titulus*.

In the Latin numeration it signifies 160, and with the line over it, 160,000.

CHAPTER XXXI.

On V.

V (or *U*) is the last of the vowels, and has for its name an articulation produced by a breath which goes out freely, and is sounded outside the mouth, as is clear from its great resemblance to *O* ; the only difference being that the lips are less opened, and the breath is driven outside the mouth. The form of the letter, <, is appropriate to the free emission of the breath, without any movement ; and because the mouth has not to be held open so widely as in *A*, the line which runs across is omitted ; and it is appropriately in the form of a trumpet, since no letter emits such a strong

expiration as this, nor in any other does the breath pass out from the chest to the lips with so little impediment.

V. signifies *vir*, *viro*, etc., etc.

V^o = *vero*.

V̄. = *vel*, *ver*.

V. V. = *viventes*, *veluti*, etc., etc.

V̄V̄. = *virī*.

V. V. V. = *viros urbis vestræ*.

In Latin numeration it represents 5, and with the line over it, 5,000. In Spanish it represents 5.

CHAPTER XXXII.

On X.

SOME authors hold that this letter, *X*, is double, because it includes both the sounds of *c* and *s*; others, moreover, consider that it is made up of *g* and *s*; it has for its name an articulation which cannot be pronounced so simply as not to partake somewhat of both these letters, because the sound belongs to each of them, and they together make up the whole sound of this letter. And thus the articulation is begun with the tongue in the position which it holds for the *c* (as in *ca*), and it then descends forward along the palate to the spot where *s* is formed, so that by trying to pronounce rapidly the guttural *c* and the *s*, this sound will be formed which represents the letter *X*. The figure of the *X*, as well as those of the *Y* and *Z*, since they do not belong to the eighteen original Latin letters, but were afterwards added, do not represent the motions of the mouth like the others.

This letter X. signifies *Xerxes*, *Xanto*.

X' = *xinodus*, or *existimatio*.

In Latin numeration it represents 10, and with the line above it, 10,000. In Spanish it represents 10.

CHAPTER XXXIII.

On Y.

THIS letter, Y, as has been said above, does not differ in sound from the Latin *I*, and therefore in this description of the names of the letters no special mention need be made of it.

In the Latin numeration it represents 150, and with the line over it, 150,000.

CHAPTER XXXIV.

On Z.

THIS letter, Z, is the last of our alphabet, and has for its name the sound of an articulation louder and more forcible than that of *c* when joined with the vowels *e* and *i*, making *ce* and *ci*, and hence its ordinary place is at the end of words, where it is more broadly and forcibly pronounced, so that we do not use the *c* either with or without the cedilla, though the sound is very similar; and at the beginning of words it is seldom used, if written properly. Antonio de Nebrija mentions it in the beginning of only fifteen words; while in the

middle of a word it is broad and strong. And in accordance with the genius of our language it is not the custom to put the *c* at the end of a word, either with or without the cedilla.

It is pronounced by making the tip of the tongue appear between the teeth.

Victorinus writes of it, that it has not the sound of a single letter, but of an entire word with two syllables. Antonio de Nebrija says, that it is a Greek letter not used in Latin words; and St. Isidore, that the Latins borrowed these two letters, *Y* and *Z*, from the Greek, and that they did not use them in writing up to the time of Augustus, but put a double *SS* for *X*, and *U* for *Y*. And Cassiodorus says the same, giving as examples *Crotalizo* written as *Crotalisso*, *Malacizo* as *Malacisso*. And Donatus says that *y* and *z* were borrowed to express Greek names—the first being a Greek vowel, the second a double consonant; whence arises the idea that the Latin letters are only seventeen in number, since the *h* is only an aspiration, *x* double, *k* and *q* superfluous, and *x*, *y*, and *z* Greek. But we have in spite of this mentioned all those in use in Spanish, not omitting any but the *K* and *Y*, the former as not being used, the latter as being equivalent in pronunciation to the *I*; and, as we have said, their forms do not retain the appropriateness which we have noted in the rest. And thus, as in the case of *X*, we shall not treat of the form of the *Z*, since the form is not in accordance with rule as in the other eighteen Latin letters.

In Latin numeration *Z* signifies 2,000, and with the line over it, 2,000,000.

CHAPTER XXXV.

On the sound of the cedilla in Ç.

THE Ç, *c* with the cedilla beneath it, is an articulation somewhat less forcible than *Z*, which we use for a broader and more vigorous sound than this, and thus in our Spanish language no word ends in *c* with the cedilla, but only in *z*, since in all those that end in this sound it has a strong and full pronunciation. The *c* with *a*, *o*, *u*, admits the cedilla to show the difference between *ça*, *ço*, *çu*, and *ca*, *co*, *cu*, these last being the three variations of *c*, which as we have said has a guttural sound, and when they have to be changed into the *ce* and *ci* sound, it is done by this cedilla; whence we see that the same sound is produced, by some with, and by some without, the cedilla; and to put the cedilla before *e* and *i* is false orthography, since there is no reason for putting it. If it represented a pronunciation more forcible than that of *ce* and *ci*, it would be *ze* and *zi*; but if *çe* and *çi* held a position midway between the two, there would necessarily be similar sounds midway between *ça*, *ço*, *çu*, and *za*, *zo*, *zu*, but the *ca*, *co*, *cu*, without the cedilla are very different. And this is implied by the Licentiate Don Sebastian de Covarrubias, in his "Thesaurus" of our language, in not putting a cedilla to any words where the *c* is followed by *e* or *i*, but only when followed by *a*, *o*, and *u*, though in old times they put it to all, if we may judge from some old books, as is clearly seen in the two volumes of Plutarch translated into our language by Alfonso de Valencia, printed in

1491; and thus the *c* with cedilla has the same sound as *c* followed by *i*, which is pronounced *ci*, and has been described under *C*.

CHAPTER XXXVI.

On the J.

THIS capital *I* (*J*), is produced by a thick sound which we call the Iota; it is used in three combinations, with the *a*, *o*, and *u*, but is not necessary with the *e* and *i*, since with these *g* has the same sound; so that these two letters are used alternately with the five vowels, forming the same sound, and producing it with the same motions of the tongue and mouth; thus, *ja*, *ge*, *gi*, *jo*, *ju*. And so the description that we gave of *g*, in as far as it is united with *e* and *i*, will serve for the *J* when joined to *a*, *o*, *u*, since there is no difference between them.

CHAPTER XXXVII.

On the mark (-) over the N (Ñ).

THE mark (-) which we put over the *n* (*ñ*) must be under-
in two ways: first, when put over a vowel it implies the omission of *n* and sometimes *m*, though it is now employed less than it used to be over other letters; and with *q* it signifies no more than that it is an abbreviation which custom has introduced as equivalent to *que*. The second use to which it is applied, which as we have said is

above the *n* (*n̄*), is a different one, as it represents a sound distinct from all the other letters and much used in our Spanish language and in Italian ; but the Italian, though using the sound, does not employ this symbol, but supplies its place by the *g* and *n*, writing *degno*, pronounced *deño* ; *bisogno*, pronounced *bisoño* ; *ogni*, *oñi*, etc.

Its formation is that of *n*, but differs in the doubling of the pressure of the tongue against the palate, as compared with that letter ; this is similar to what takes place when one is sealing, when he first touches and afterwards presses upon the same place ; this is what is done by the tongue when after touching the palate to form *n*, it presses upon it to produce this sound, though more forcibly than with *nn*. And though it might have been expected that this sound, so distinct from the rest, would have had a symbol to mark it as a distinct articulation, it may be easily explained, inasmuch as its use is solely as an addition to the *n*, which is really not doubled (though it may appear to be), since before its formation is finally completed the tongue begins to press continuously upon the same part ; and thus it could not be represented by the *nn*, since they are not both distinctly pronounced. The most that can be done is to represent it as a modification of the *n*, which is done by this line placed above it ; clearly the right position, since it could not be written in the same place without the one blotting out the other, and instead of the line making an addition to the *n* it would have the effect of erasing it.

CHAPTER XXXVIII.

Of the part which has to be omitted from each letter to leave its simple name; and of those which have to be learnt in combination on account of the variation in their pronunciation.

WE have now said all we are able about the letters, and about what appeared to be connected with them. We have now to consider how to prepare them for use on an intelligent basis.

He who is learning to read must enumerate these letters, calling them by their simple names, as we have said; and in order that there may be no need to turn back to find which are the vowels, from which nothing need be taken, since they are and always have been simple, and which are the consonants with which this simplification is concerned, they will be tabulated here, each letter followed by the compound name now in use, and also by the part of this name which has to be subtracted that the true pronunciation may be left :—

a	<i>a</i>	vowel.	o	<i>o</i>	vowel.
b	<i>be</i>	omit the <i>e</i> .	p	<i>pe</i>	omit the <i>e</i> .
c	<i>ce</i>	" " "	q	<i>qu</i>	pronounced as written.
d	<i>de</i>	" " "	r	<i>ere</i>	omit the two <i>e</i> 's.
e	<i>e</i>	vowel.	s	<i>ese</i>	" " " "
f	<i>e fe</i>	omit the two <i>e</i> 's.	t	<i>te</i>	" " <i>e</i> .
g	<i>ge</i>	" " <i>e</i> .	u	<i>u</i>	vowel.
h	<i>hache</i>	omit <i>ache</i> .	x	<i>equix</i>	omit <i>equi</i> .
i	<i>i</i>	vowel.	y	<i>ygriega</i>	" <i>griega</i> .
l	<i>ele</i>	omit the two <i>e</i> 's.	z	<i>zeda</i>	" <i>eda</i> .
m	<i>eme</i>	" " " "			
n	<i>ene</i>	" " " "			

Having finished teaching the simple names of the letters, if the pupil does not pronounce them very distinctly apart from the vowels with which they are combined, as is desired, care should be at least taken that when he is not able to help adding a sound it should be joined at the end of the name of the letter, and not at the beginning; as we have said in chap. xii., which should for this reason be kept in view.

There will be no need to teach the pupil to combine the letters, with the exception of those which follow, on account of the uncertainty caused by their being pronounced in more than one way :—

ce, ci.	ja, ge, gi, jo, ju.
ca, co, cu.	cha, che, chi, cho, chu.
ça, ço, çu.	ña, ñe, ñi, ño, ñu.
ga, go, gu.	

The pronunciation must be taught by saying that the *c* with *a*, *o*, *u*, forms one class of pronunciation, and with *e* and *i* another, and so on for the rest. And should any difficulty present itself, it may be removed by reference to the chapter dealing with that particular letter.

The pronunciation, then, being known, we must set the pupil to read, telling him to name the letters quickly, keeping the pauses shown by the divisions between the words; and in this way he will learn to read. So that the better he has first mastered the letters by their simple names, the faster he will be able to read; since reading consists of this alone. If he be a person of ability, he may learn to read in four days. Nor is this

any great exaggeration; for as our Spanish proverb describes a thing which it would show to be plain as one "which a blind man can see," so we may with even greater safety, say, in this case that "even a dumb man will say it;" and that we may be able so to say we shall make a beginning of the method in the following book.

BOOK II.

THE METHOD OF TEACHING DEAF-MUTES TO SPEAK.

CHAPTER I.

On the causes whence dumbness proceeds, and on the age at which we should begin to teach speech that the deaf-mute may learn as easily as possible.

DUMBNESS arises from two causes, both of which may exist in the same person. The first and most general cause that we find in the dumb is deafness, the sense of hearing being extremely obstructed; and speech itself being but the imitation of that which has been heard, it follows that he who cannot hear cannot speak, notwithstanding that the tongue as an instrument is able, fitted and free to perform the motions necessary for the pronounciation of words; as in its extension, withdrawal, depression and elevation to the palate, its projection against the teeth, its twist and its curvature, and the other movements exerted in articulation.

The second cause arises from the peculiarity of secreting saliva which impedes the hearing, or the secreted saliva may impede the motion of the tongue, or that organ may be defective by nature as was the case with

the hearing, or the instrumental nerves of the tongue may be so; so that a person who hears well may be dumb through the defects of the vocal organs, and others may be so from both causes.

Those who are dumb because they cannot hear, which is generally the case, may be taught to speak by this art; but it will be impossible to teach those who are dumb through lingual impediment, even though they hear. And thus our teaching is restricted to those whose dumbness proceeds from deafness; but if the lingual defect be not very great, we should not reject such as hopelessly deficient, for they might speak as stammerers, more or less according to the greater or less facility of moving the tongue.

It is very proper to deliberate as to the best age for beginning to teach, for while so far as concerns the art one could teach more successfully where the parts had been well exercised, it must be considered that although the dumb person may have had no defect of the tongue at his birth, still its non-use for many years is sufficient to prove an impediment, as would be the case with a man having both arms sound, who, were he to have one of them bandaged and thrown out of use, would come to lose the natural power of the limb, so that it would take a long time for it to recover its former facility of motion. And as the voice is a strong puff of air, most frequently modulated by different movements of the tongue, which consists of many nerves, and since the following different instruments are necessary—the lungs, the arteries, the throat, the epiglottis, the mouth, the teeth, the lips and the tongue, and of these some serve as receptacles for the voice, *e. g.* the lungs with

their air-tubes; others, like the arteries, as regulators giving the charm of modulated harmony, while the lungs are conduits through which the voice is projected, —we might readily anticipate the harshness that would arise if they had been long unused. Taking all this into consideration, from the sixth to the eighth year is the best age to begin the instruction.

CHAPTER II.

Demonstrating that the deaf-mute cannot learn to speak by any other mode than the one here set forth.

SINCE there is no impediment in the tongue, as we have said, it is all reduced to what may exist in the hearing. This defect some have tried to remedy by taking the deaf into the country, and into valleys where the voice has a greater resonance, and there making them utter loud sounds, and with such violence that the blood issued from their mouths; also by placing them in barrels where the voice re-echoed, and where, as being more closely imprisoned, they might hear it;—expedients too violent, and in nowise permissible.

And thus it will be necessary to say somewhat, though briefly, on this point, in order that by the knowledge of how the voice acquires its “intelligent force,” violent and useless methods may not be applied.

This “intelligent force” is divided into two elements: the common sense of perception, which we call internal; and the special senses, which we call external: these are the sight, hearing, taste and touch. This common perception is manifested by means of the external senses,

to which descend from the brain certain nerves, producing the several effects; to the ears go two, one to each, and they are connected with the aperture, which is a hollow, winding bone, called by physicians "the stony"—a dry cartilaginous, hard bone, hollowed out so that the air is retained in its cavity, and may not enter directly in and do injury to the sense. By the nerves which we have mentioned the vital nerve force descends, and when the air reaches it from without, representing the form of a sound, it moves and awakens the auditive sense, which travels to the seat of the intellect; where the mind becomes cognizant of the sound as present. And for this process four things are necessary; an efficient cause; a suitable organ; the attention of the mind; and the medium of hearing. The efficient cause is the physical auditive power. The fitting organ is the opening of the ear, with all the properties we have mentioned. The attention of the mind consists in its not being diverted to anything other than that with which it is occupied; and, indeed, this being so desirable for the comprehension of things, it is usual to hold the breath that it may not hinder the hearing; and thus when anyone desires to listen with attention, he holds his breath even unconsciously, because it is an action by which the mind aids itself in order that the function of hearing may be performed; and Aristotle says: "We hear better when we hold the breath." The necessary medium is the air by which the sound passes to the ears.

If any one of these four things be wanting it is sufficient to produce deafness. In the deaf-mute two are wanting, the one caused by the other: the physical

auditive power is lacking, because the organ does not afford the power of extension as far as to the spot where it has to receive the air conveying the sound to the ears—though the other two are ready to work, viz. the attention of the mind and the sound which strikes upon the ear; whence we shall conclude that neither the loud sounds some make or cause the deaf to utter, nor their closest attention, will have any effect towards remedying this defect of the sense, but will only weaken it more. And if by so violent a method anything is heard it will be a confused noise, which will arrive at the brain in so inarticulate a form that the mind cannot form any conception from it. And so it is needful to choose some other more certain medium; and there is none like that of this method, so well adapted to nature that it would seem as if this artificial language had been derived from the language of nature, or that from this, since visible actions are nature's language. And this is supported by the fact that if deaf-mutes meet, though they have never seen one another before, they understand each other by the use of the same signs. And although Herodotus of Halicarnassus tells us that Psammeticus King of Egypt caused two children to be brought up by a shepherd in a desert place, with special care that no one should speak to them; and that when brought before him at the age of four years they said several times *beccus*, a word which in the Phrygian language means *bread*; it is improbable that we ought to consider that this language, or any other that had not been taught, could be spoken by anyone. But we should rather accept the explanation that has been given of it as follows: that although the children were kept from

hearing the voice of men, they could hear the bleating of sheep (the more probably that it was a shepherd who brought them up), which seems to have been the most likely explanation of this word *beccus*. For we have a still more opportune illustration in the case of the deaf, since without the necessity of carrying them away into the desert, they are incapacitated from hearing men and animals also. And we know of none who have spoken this language or any other by natural tendency, but only by art, some of them having been taught our own language ; and the deaf will try harder to speak than those brought up in uninhabited places, because the latter do not know that there is such a thing as speech, or that there is any necessity for it in order to understand things ; for though they see people they do not perceive them speak ; while the deaf know that we speak. And as to its being the Hebrew or Phrygian language which some say those brought up in seclusion naturally speak, like these children, it is certain that it would have been found out among the deaf in the manner stated, and there is no reason why all others should speak it because Adam did so without being taught, since they lack the inspired knowledge which he possessed.

CHAPTER III.

*The letters have to be taught the deaf by means
of signs.*

By what has been said in the preceding chapter we find ourselves excluded from using the hearing, and

we are therefore obliged to make some other sense supply the lack of this one. This the sight is able to do, for though by its means the sound itself cannot enter, yet the knowledge of its formation can do so, and so well and perfectly that the deaf-mute can pronounce it as well as if he had his hearing. And for this it must be accepted as certain that the deaf are both most quick to comprehend the gestures made to them, because they attempt thus to supply the loss of hearing, and very clever at making use of them themselves, which they do in order to make themselves understood, and to fill the place of speech. And so the instrument to be chosen should be one to which they are habituated, and the sounds of the letters must be made known to them by signs. And this can be done, as in the former book, by denuding and clearing them of that compound part which the names of the seventeen letters possess; and they are thus made fit for the deaf-mute to receive, since we need but a single articulation for each, and this can be uttered by the deaf as well as by the hearing; and they have to pronounce any letter by producing this articulation with the lips and teeth in the position required for the pronunciation of its name. An illustration of this may be found in the guitar, for if the fingers are placed on any combination of strings, it matters not who strikes the strings the same sound will be produced, whether voluntarily or not.

Thus, also, when the deaf-mute holds his mouth in the same position as ordinary people, we have put him in the position to form a letter, and if he utter the sound the same letter will be pronounced that we make; and by learning to pronounce the total number

of articulations which our alphabet represents, he will know how to read, and the facility with which he does it is the result of having given the letters their simple names: then by proceeding to name them quickly, retaining the pauses between the words, the deaf-mute will learn to read. And since, before teaching him the spoken names of the letters, he must be well acquainted with them and know the manual sign which represents each one, we have placed the manual alphabet at the close of this chapter, showing the position of the hand for each letter, with the symbol written above it—both the capital and the ordinary form, so that he may know both of them and the figure which represents them. And apart from the deaf it is a matter of interest that all ought to learn for special occasions that may arise.

In ancient times it used to be held a convenience to know the use of signs with the hands and other parts of the body, to represent letters and numbers, as we gather from the writings of John Baptista Porta, in his work, *De Furtivis Literarum*, where he enumerates many ways of reckoning by means of the hand. And in the same way, touching different parts of the body used to signify letters: indicating *A* by *auris*, the ears; *B*, *barba*, the beard; *C*, *caput*, the head; *D*, *dentes*, the teeth; *E*, *epar*, the liver; *F*, *frons*, the forehead; *G*, *guttur*, the throat; *H*, *humero*, the shoulders; *I*, *ilia*, the flanks; *L*, *lingua*, the tongue; *M*, *manus*, the hand; *N*, *nasus*, the nose; *O*, *oculi*, the eyes; *P*, *palatus*, the palate; *Q*, *quinque digiti*, the five fingers; *R*, *renes*, the kidneys; *S*, *supercilia*, the eyebrows; *T*, *tempora*, the temples; *V*, *venter*, the belly.

We have not given the manual gestures for *k, x, y, z*, since, as has been said in Book I., they are not employed in the Latin language.

Returning to our teaching, we must cause the deaf-mute to form with his right hand all these signs as they are seen in the pictures, the teacher doing the same, since the pupil will learn them with more ease if he sees them imitated on the hand of his master ; and when each one is made we must point with the left hand to the corresponding letter, until, without seeing the picture or the sign on the hand of the teacher, he knows how to make each letter, and to recognize them all on an alphabet we shall give further on of both capitals and small letters which will serve as a test of his knowledge of the, manual alphabet. Afterwards we must go on to show him printing in a book, asking him to show on his hand any letter that the master touches with his finger. And it will be very necessary that, in a house where there is a deaf-mute, all who can read should be acquainted with this alphabet, in order to converse with him by its means and not by other signs, which will be less beneficial to him, whether it be writing or manual gestures ; nor should they permit him to make use of them, but he should reply by word of mouth to the questions put to him, even though he may err in the pronunciation of his replies ; and we must take care to correct him constantly, for this is the way in which all who are learning a new language succeed in mastering it, by making mistakes and noticing the corrections.

(Here follow the plates of the Manual Alphabet.)

CHAPTER IV.

*Explanations of the manual signs which represent
the j, y, z, and (~).*

THE signs depicted in this manual alphabet represent the letters that are written above them, and as the capitals differ so much from the small ones in form, they are both given; and it must be remembered that when *I* has the value of *J*, the hand, being placed in the position of *I*, has to be moved so that the little finger describes an arc of a circle from left to right, as is shown in the plate.

The *Y* and *Z* also have the same sign, differing in that to make *Y* the hand has to remain in the position depicted, while for the *Z* the hand must move as if writing the letter in the air, as is shown by the zigzag line beneath, ending at the little finger, the hand being kept all the while in the position for *Y*.

To form the *tilde* (~) the position of the fingers is not to be altered, but the whole hand is to be moved, as if to make the turn in the air; there is no need however to puzzle the deaf-mute by teaching him the *J*, nor the (~), but only the *Z*, and the others can be taught when he learns the sounds of the letters.

Assuming him to have become thoroughly acquainted with the manual alphabet, the deaf-mute must be tested by the two alphabets given below—the one of the capital, the other of the small letters. He must be shown each letter with the finger, and made to understand that he is to form the sign for it on his hand, and this not only in consecutive order, but irregularly; and if he makes any

mistake he must be turned back to the plate—where each letter is given with its name over it—and shown what is right ; so that he may know them all intelligently, understanding that the sign and the character are the same ; and until he knows how to form the letters on his fingers with perfect dexterity and quickness, and recognizes them in whatever order he sees them, he is not to be taught their pronunciation, in order not to confuse him with new things before he has mastered the old.

A B C D E F G H I L M N O P Q R S T U X Y Z.

a b c d e f g h i l m n o p q r s t u x y z.

As soon as he is well versed in the manual and in these two alphabets, we must proceed to teach him the pronunciation of the letters, as will be shown in the following chapter.

CHAPTER V.

On the manner of teaching the deaf-mute to pronounce the letters.

IN order to teach the deaf-mute the names of the simple letters, upon which reading depends, the master and he must be alone, as it is a matter which demands great attention, and he must not be distracted. The room must be a very light one, that he may see the whole of the interior of his teacher's mouth ; he must then begin with the five vowels, inasmuch as they are easier to pronounce, and they play a great part in the respiration with which the others have to be formed ; besides which the pupil, seeing the ease with which he has learnt these, will be encouraged to proceed with the rest. The

teacher must have great patience, so that if after trying three or four times the pupil fails to pronounce a sound or the name of a letter, he may encourage him to continue trying again and again ; but if he sees he is troubled at not succeeding, he must leave it and pass on to another letter, and some other day he will be able to produce another tone of voice, more appropriate to the required articulation. And it must not be considered a hardship, in a matter so difficult, to have considerable labour ; indeed it will not seem so great a thing, if we think how impossible it is to tune two instruments to the same pitch when each of the tuners is unable to hear the note of the other to which he has to adjust his own ; and it is the same with the voice of the deaf-mute, which he has to adjust to that which he cannot hear, but by patience and by adhering to this method he will attain to it in the end.

For the sake of ease, and so as not to have to keep putting the fingers into the mouth of the pupil in order to adjust the tongue to its right place, we can teach him by means of a tongue made of leather, which we can double up and curve with the hand, and have in view for all the motions which he has to make with his own ; besides that he can see into his master's mouth, which as we have said must be held towards the light, so that he may be able to understand the position his own is to take.

Also we must note that in teaching him to pronounce each letter, we should first make it on the fingers, and show him it in each of the alphabets given in the preceding chapter, in order that he may comprehend what he is pronouncing.

CHAPTER VI.

On the position and motions necessary for the mouth, tongue, teeth and lips, for the deaf-mute to pronounce each letter.

A.

IN order that the deaf-mute may pronounce this letter he must keep the mouth open and allow the breath to go out freely, without any motion of the tongue or lips ; and the teacher will hold the pupil's hand and breathe into the palm, so that he may understand that it is not enough to keep the mouth open, but that the breath must be expelled in order to make the pronunciation. And when he succeeds in pronouncing the sound he is learning the teacher must make him understand by an action of approval ; and as long as he does not succeed he must indicate it by shaking the head and the second finger of the right hand—each of which gestures signifies "No."

E.

To pronounce the sound which serves as the name of this letter, the deaf-mute must make an expiration, drawing the lips back, and half opening the mouth without moving the tongue.

I.

This letter is pronounced by keeping the teeth all but closed, and the tongue extended so as to be almost on a level with them.

O.

This is to be pronounced by forming the mouth and

lips into the circular shape of the letter itself, and for this end the lips are pushed forward and outward away from the teeth, and the tongue is not moved.

U.

For the pronunciation of this letter the lips are protruded even more than for *O*, so much so that their inner side appears to turn a little outwards, the mouth is very much contracted, and the breath is driven out so suddenly and forcibly that if a candle be held near the mouth it will be blown out or nearly so.

B.

To pronounce this letter the lips have to be closed, and then slightly and gently opened when the breath strikes against them, the tongue remaining at rest.

C.

For this letter the mouth has to be somewhat less open than for the pronunciation of *A*. The tongue is arched near the root, and touches the palate with the curved part; the breath strikes against the palate and the tongue, and when this takes place the tongue must be withdrawn—the master making it understood that for some letters the tongue is moved, while for others it remains fixed. The master must open his mouth widely, that the deaf-mute may see the position of the tongue, and if he does not succeed in placing his own so, it will be necessary to put it in the right position with the hand; though for greater ease and cleanliness the leather tongue mentioned above may

be made use of, by which the position may be shown in the palm of the hand.

This is the guttural sound of the *C*, which is the sound that it has before *a*, *o*, and *u*; of the other sound we shall speak when we treat of the *Z*.

D.

The name of this letter will be formed by bending the tongue so as to touch the gums and teeth with the lower part of its tip, and thus closing the mouth as if to prevent the breath from going out, which will strike upon this spot and force away the tongue. And in order that the pupil may know that the tongue has not to continue applied to the palate, but to be separated from it at the moment when the breath reaches the place, the leather tongue must be placed in the palm of the hand, raising the point into the position described above, and blowing upon it in such a manner that the force of the breath moves it away; so that he may understand that the tongue has to be moved away in the same manner when the breath reaches it.

F.

In order that the deaf-mute may form the name of this letter he must expel the breath, holding the upper teeth against the lower lip, and keeping the tongue still.

G.

This letter has two sounds, for the reasons given in Book I., and the deaf-mute has to learn them both. For the first, which is that of the combinations *ga*, *go*, *gu*, he must hold his mouth half opened, in the

position for *C*, and bend the tongue in the middle, touching the palate with the curved part of it, where the breath will strike. For the pronunciation of this letter it will be necessary for the teacher to show his throat to the pupil, so that he may see how its channel rises after the expiration, and how it returns to its former position.

The second sound of this letter is that used before *e* and *i*; for this he must curve the tongue more than he did for the first sound, and must touch the palate with the curved part farther back in the gums; and though the breath strikes upon this spot the tongue is not to be removed from its position, but to remain there. This is the same sound as the *J*, and in order to prevent confusion it will be well not to teach him this second sound of the *G*, because he will be confused by seeing that we say it has sometimes one sound and sometimes another, so that it will be more advantageous to leave it till after the sound of *J* is learnt, just as we have left the sound of *ce*, *ci*, and of *ça*, *ço*, *çu*, until after the *Z*.

H.

This letter the deaf-mute is to form by simply expelling a very gentle breath, without voice as in the other letters, and the mouth is to be in the form which it takes for *A*. In addition to this the letter has another sound, but an irregular one, when *c* is prefixed to it, as in *muchacho*; and since the sound does not belong entirely to either the *c* or the *h*, we shall leave it to be treated when we add the letters that are exceptional.

L.

The deaf-mute will pronounce this letter by striking the palate with the lower third of the tongue, with the under side of it, the tongue being curved in such a way as to be doubled up and to touch the palate with its lower part; and upon reaching that place the portion of the air which takes part in the articulation, which is that portion that desires to escape, will force the tongue away.

M.

The pupil will pronounce this if, when he is about to utter the sound, he is told to close the lips so tightly that the sound cannot escape by the mouth, but only by the nostrils. There is no other action in forming the letter, and thus he may be told simply to breathe through the nostrils, while making an effort as if to drive it out by the mouth.

N.

For the production of this sound he must touch the palate close to the teeth, with the tip of the tongue, and this has to be done with the lower side of the tip, the mouth being very slightly, the lips somewhat more open; and the breath is to be emitted by both the mouth and the nose.

P.

This will be formed by the deaf-mute closing his lips as he did for *B*. And inasmuch as it is needful to hold them more firmly compressed, the master will point out that his own are fully closed, and will press his thumb and finger firmly together, showing him that

he must compress his lips in the same way ; he must then make the action of drawing in his breath and preventing its escape, then showing him that the lips are afterwards forcibly driven apart by the air escaping ; but this letter is not formed by the voice, but by the breath, imprisoned so that it may be violently expelled. And it will be a good plan for the master to blow into the palm of his hand with sufficient force for the utterance of this letter, in order to facilitate its pronunciation.

Q.

To enable the deaf-mute to pronounce this letter we must make him say the *C* and the *U*, and there will be found two ways of doing this, either by causing him to pronounce first the *C*, and then the *U*, and afterwards joining them, the two together forming this sound, for which it will be necessary for him to be shown that he is to join them by making a gesture as of clapping one hand on the other ; or else the teacher must adjust his tongue to the position for *C*, and his lips to the position for *U*, and in this way the expiration will form the two parts of this letter which go to make up its pronunciation.

R.

To produce this letter the tip of the tongue (on the under side), has to touch the middle of the palate, and the force of the respiration has to make the tongue vibrate ; for this purpose the pupil must not keep it quite fixed, but so as to touch the palate gently—for if it does so too firmly the breath will not be able to move it with sufficient rapidity. And in order to facilitate its production, the teacher will make a paper tongue, similar

to the leather one we have spoken of already, and will double the tip of it so as to bring the under part uppermost, which is the form the tongue has to take in the mouth to touch the palate, and he will then blow upon the tip of the paper tongue, doubled in the way described, and the paper being thin the tip will immediately vibrate, from which he will learn that in the same way his own tongue is to be made to vibrate by the breath striking upon it.

S.

In order to pronounce this letter the deaf-mute has to put the tip of his tongue upon the gums, so as almost to touch the upper teeth. It is easy to pronounce.

T.

The deaf-mute will pronounce this letter by keeping the tip of the tongue pressed against the edge of the upper teeth, without letting it appear outside; then driving the breath against it and the teeth it must be suddenly withdrawn, as if it were desired to expel the saliva together with the expiration.

X.

This letter he must form by means of two sounds, the *C* and the *S*, just as the *C* and the *U* were used for the *Q*, because both are double sounds; but in the *X*, the *C* and the *S* are pronounced more fully than the other two in the *Q*. For this letter the tongue must be placed in the position above described for *C*, and the articulation must be ended in the position for *S*;

but since these two positions are nearer together than those of *C* and *U*, they are more closely united in the articulation.

Y.

This letter is placed here, not that its pronunciation has to be taught, but so that when it is met with the teacher may point to the *I* in the alphabet, making it plain that that they both have the same sound.

Z.

To pronounce this letter the deaf-mute has to place the tip of his tongue between the teeth, and expel the breath so that it may go out without the tongue moving from its place.

Ç.

This *Ç* with the cedilla has been left till now, in order to teach it by means of the *Z*, on account of the facility of teaching it when that sound is once known; and the deaf-mute must be given to understand that it has the same sound—for as there is no difference except that the sibilant sound is more forcible in one than the other, it will not be important in the speech of the deaf-mute; but when he has become more expert he will be taught that there is a difference between *Z* and *Ç*, in that the latter is less vigorous than the former; and it is pronounced by pressing the tongue against the upper teeth.

When he is found to have acquired the pronunciation of this *Ç* with the cedilla, he must be shown another *C* without it, and asked to pronounce it, and if

he pronounce it with the guttural sound as was taught at the beginning, the teacher will show him by applause that he has spoken well; but then he will show him that it also has this other sound, like that with the cedilla, pointing to it in conjunction with the *e*, and *i*, when it is pronounced *ce*, *ci*.

J.

This letter is used in our Spanish language when followed by *a*, *o*, or *u*, with the pronunciation of *ja*, *jo*, *ju*, and the only cases where some confusion might be caused by this rule are given by Antonio de Nebrija in his Dictionary of the Romance Language in Latin, distinguishing such cases by the use of the *Y*, though in this the Licentiate Don Sebastian de Covarrubias does not agree with me, since he does not make use of it in any word. The formation of the *J* is that of the *G*, not guttural—the second sound given by us; and thus it must be taught that this and that are the same.

(~)

This *tilde* has to be taught in two ways, because it is used for two sounds, one when placed over the *n*, which has then a different sound from all the other letters; and the other when placed above *a*, *e*, *i*, *o*, *u*, when it signifies *n*. And thus when the deaf-mute is joining the letters he has to be taught that the *ñ* is the same as *n*, and has to be pronounced in precisely the same way, and in the same position as that letter, with additional pressure of the tongue against the palate in the same place, as was said above, when the desired

sound will be produced, different from that of the *n* without the tilde.

We shall now give those letters which the deaf-mute will have any difficulty in uniting; with the others there will be none. And note that, though in this table the *Ç* with the cedilla and the *C* without it appear both in the same line, it is when they have the same sound; and the same must be understood of the line containing the *J* and the *G*; the sound of *cha*, as in *muchacho*, will be formed by the deaf-mute pressing his tongue against the palate with the whole of the hinder third of it, rubbing it slightly against the palate. And the mouth is to be opened at the end of the articulation, that the breath may go out in such a way as to form *a*.

Six rules which the deaf-mute has to learn before being set to read—

ca, co, cu.

ça, ce, ci, ço, çu.

ga, go, gu.

Fa, ge, gi, Fo, Fu.

cha, che, chi, cho, chu.

ña, ñe, ñi, ño, ñu.

To pronounce these syllables, the deaf-mute must be shown the letter *c*, by the manual alphabet, or by writing, and he will pronounce it as he has been taught; then the same must be done with the *a*, and the teacher must then tell him to join them, which he will do by a sign that the pupil will understand, as by clapping the hands firmly together, or by drawing a circle in the air to end where it began, to show the bringing together and joining these sounds; and when he knows the *ca*, *co*, and *cu*, he must be taught the *ça*, *ce*, *ci*, *ço*, *çu*, all of which are to be pronounced with the lisping sound that we have described above; and when he knows them they

must be given in the wrong order ; and if he calls them by the wrong sounds, as by saying *ca* for *ça* or *vice versa*, he must be shown by a gesture that he is wrong, and it must be pointed out that this syllable does not belong to that line ; and so on with the other lines ; and these being known it will be easy to unite the other letters two by two, since all the vowels follow the same rule, and he will learn them all with great ease. Then going on to name the letters rapidly by their simple names, as we have taught them, he will join them together in reading ; and these six rules being known, there will be nothing left to puzzle him.

CHAPTER VII.

How to teach the deaf-mute to combine the letters.

WHEN the pronunciation of the letters, which is the same thing as their names, is well grasped, the pupil must be taught to join them together to form words, beginning with the easiest, which will be those consisting of syllables of two letters each, as *vela*, *bufete*, *guante*, *espada*, *cabeça* ; and the teacher should take care that the words selected are the names of things at hand, so that when the pupil succeeds in pronouncing the word, he may be made to understand by signs that what he has said is the name of that thing : as, for example, if we would have him say *vela*—which is easy to pronounce on account of being a word of only two syllables, each containing only two letters—the master will make *v* on his fingers, or by writing, and show him that he is to pronounce it, and he will do so ; then the

master will make an *e*, and he will pronounce that ; and he will then make the sign for joining them together, until he can pronounce *ve* with rapidity, saying the two letters together ; and having done this the master will do the same for the *l* and *a* ; and this being pronounced he will return to the syllable *ve*, and afterwards he will be made to repeat the four letters, each syllable by itself, so as to say *ve, la* ; and then the same sign used above to join the two letters, will cause him to unite the two syllables, until he says *vela* ; and when he succeeds in this the teacher will make a gesture of applause, so that he may know he is right, and he must then be shown a candle, so that he may learn that this word is the name of this object ; and by composing a word like this he will compose all others with the greatest ease. But, as we have said, care must be taken to begin with words of few syllables, and each syllable of two letters ; after which words of three and four syllables may be taught, such as *guante, bufete, tapete* ; and these being known he can learn words composed of syllables of more letters ; and when he knows how to form those of three letters, which will be as easily done as those of two (since the difficulty lies entirely in the beginning), he can be taught to read, care being taken to do it little by little, so that he may pronounce the words distinctly ; nor will it be surprising if he does not do so at first, since he does not understand what he is reading. In this case the teacher must turn him back to read it again, marking the divisions shown by the words, and pointing out the comma and full stop, so that he may understand their meaning, which he will do after a few times. And we must not mind that he does not understand what he is

reading, for up to now we have not treated of anything beyond teaching him to join the letters together in such a way as to read in a manner intelligible to those who hear him, although not himself understanding what he says; this has to be taught later, just as those who read Latin well may not comprehend its meaning, for one thing must be done at a time, and when he has learnt to read writing and manual spelling he may go on to what we shall teach in the next chapter.

CHAPTER VIII.

*In which the parts of speech are reduced to three,
and are defined.*

Now that we have made the deaf-mute expert in reading, and put him in a position to acquire our language, we have to teach him by reducing it to rules; and whereas people do not usually learn their native language from a master designed to teach it, this is because we use as our teachers all who converse with us, and all whom we hear speaking to one another; but this continuous method cannot be employed with the deaf on account of their defect, whence we have to seek out rules so compendious and suitable as to supply the want, such as we give here.

Every kind of language, spoken as well as written, is formed of propositions, the propositions of parts of speech, these of syllables, the syllables of letters. And these letters are the elements of and the guides to everything, as has been shown at length in the former book, where we dealt with the syllables as far as seemed

necessary. And now we have to treat of the parts of speech in such a manner that, by reducing them to a simpler classification than that of the Latin grammarians, we may facilitate the education of the deaf.

The learned Francisco Sanchez Brocense in his *Minerva*, says that speech is divided into three parts—the noun, the verb and the conjunction; and that the Hebrews employ three also, viz. the noun, the verb and the particle; and the Arabs the same, calling them *phael*, *ismi* and *herph*; and all the Oriental languages have the same. And further on he says that a Rabbi once disputed with Cosdras, King of Persia, as to whether all languages were derived from the Hebrew, and whether the Greek and Latin did not anciently possess only three parts of speech; and Plutarch gives the same opinion in his *Examination of Plato*; and St. Augustine also in his *Categories*, thus agreeing with the view of Aristotle. Diogenes Laertius, in his *Life of Zeno*, reckons five, while Quintilian, Aristarchus, Palemon, Carisius, Diomedes, Probus, Phocas the Younger, Asperius, Erasmus, Vaseus, the ancient grammarians, and Julius Cæsar Scaliger, Joseph his son, Despauterius, Manuel Alvarez and others reckon eight. Antonio de Nebrija adds also the gerund. Servius said there were eleven. Priscian writes that some authors give them as nine, others ten, others eleven and others twelve. And thus while there is no universal agreement, still the greater number hold to the opinion that there are eight. But for our purpose it is sufficient to make three, in which we include the whole grammar of our language, and by which we shall render our aim much easier of attainment, viz. to simplify

all that we have to teach the deaf-mute. These three parts will be the noun, verb and conjunction ; including in the class we call the noun, all words which admit of gender and number ; in the verb, all which imply variation of person, tense and number ; in the conjunction all those words which have neither inflexion nor gender and number, nor tense, but are always used in the same form ; and because they are always used to connect nouns and verbs we may include them all under this term.

CHAPTER IX.

On the noun and its divisions, and the manner of teaching it.

NOUNS are that class of words by which we name the things that have actual existence, or their qualities ; and, as we have said, they have two numbers, one of which we call singular, and the other plural ; while in the Spanish language there are no cases, as in Latin and Greek.

A singular noun is one which is confined and limited to one object, *a house, a book*. The plural number is that which admits two or more, since by *men, houses, books*, we may understand two or many.

This class of words, the noun, has to be divided into two heads, first, the *demonstrative real*, and secondly, the *demonstrative not real* ; the former is the name we give to things that have a real existence, by which they become manifest to us ; or, to explain our meaning further, they are those whose physical existence can be discerned by our sight. The teaching of these will be

easy, since by showing the object and spelling its name on the fingers, the pupil will understand it, and will recognize in it all the qualities by which it is manifested to us, as: "*This is called horse, this window, that chair,*" and so on for other names. And so we must proceed to teach the names of all that can be seen.

Nouns *demonstrative not real* (abstract nouns) are the names of things that have no form discernible to the eye, to enable the mind to judge of the object in a complete and perfect form, but they are names of qualities; as, *choice, distinction, conclusion, difference, agreement*, and many others like them; which on account of their not having any actual existence, and because they cannot be taught to the deaf-mute by signs, we may call abstract. In these abstract nouns are included all the names of those things we call mental conditions, as love, hate, jealousy, contrition, wrath, cruelty, and almost all the vices and virtues. A difference has to be made in the teaching of these, inasmuch as those which are *not* mental conditions may be taught by means of signs; but it would be an endless task to write down in full the method of teaching each one, which must be left to the master to decide upon, so as to choose an appropriate sign for each thing he wishes to teach; here we can only give general rules. But mental conditions cannot be represented by signs; hence they must be taught in a different way from the others, for as they are things having no objective existence, and incapable of actual demonstration, the pupil might in this way receive in his mind confused conceptions of them, through which his understanding would err. And in the paramount matter of religion

the most essential things would be misunderstood, which are the knowledge of God and of His commandments, and of the nature of sin ; and it is therefore necessary to take the utmost pains with this part of his education ; and so we shall give here a method at once so easy and so sure that no hearing person could better understand the meaning of the names.

The deaf-mute is subject to the same passions as we are, for they proceed from the natural powers of the mind, which are unimpaired, though apt to be badly informed on account of the part which hearing plays in their formation, and which is lacking in the deaf. All, therefore, that is intended to supply its place must be done with the utmost perfection and precision ; and we must not attempt to teach him the nature and the names of these things at once, but wait for an occasion on which he exhibits such states of mind, and then tell him they are called hate, love, or whatever it may be ; and in this way he will gain a clear conception of what the name signifies in all its bearings. And inasmuch as it is necessary to speech that these names should be known on account of their relation to other words ; and because all these passions do not have sway in the time of youth ; and if we wait till they show themselves he will progress but slowly, on account of the dependence of one class of thoughts upon another ; it will therefore be necessary to cause the deaf-mute to enter into those states to which his age renders him liable, taking care not to impel him towards anything in which he might commit sin ; but using such methods as to make him slightly angry, or to cause him to desire something which he may without sinning.

CHAPTER X.

On the nature of the conjunction.

WE shall treat of the conjunction before the verb, because the latter is very complex, and we shall therefore leave it till the last. Under the name conjunction, we have included those words which the Latins call adverbs, prepositions and interjections, being words always used in the same way, and always signifying the same thing—since they have no inflexion, gender or number ; as, *never, when, and, there, oh, with, by, for, in, whence, then, of*, and many others that serve to unite sentences ; and, as we have seen, they are not words to which the idea of number can be applied, since we cannot say *nevers, whens, wheres*, for they cannot receive the augment of number ; nor are they capable of gender, since they do not agree with any article, for we do not say *the for, the by* (masculine and feminine). These words the deaf-mute has to learn in combination with the sentences which intervene, in order to learn to use them in their proper connection.

For this reason those who converse with the deaf-mute must always be careful that in asking him anything, or replying to him, the sentence shall be as complete as if they were speaking to a hearing person and never answer him by signs, or say things that are inaccurate and must be afterwards corrected, which will give rise to difficulty ; but everything that is said to him should be accurate and true.

The greater number of the words we call conjunctions are given here, so that the deaf-mute may practise

himself in reading them over and over, which will prepare his memory for the time he wants to use them. And since he has two things to learn, how to name them and how to employ them in their appropriate places, it will be well for him by thoroughly practising the first, to prepare the way for the second; and for this it will be necessary for him to commit them to memory, so that when he is being taught how to use them by the manual language, he may not have to give his attention to two things at once, both the name of the conjunction and also its use, but only to the second.

(Here follows a list of about five hundred adverbs, conjunctions, prepositions, etc., being the greater number of those in common use in Spanish.)

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CHAPTER XI.

On the gender of nouns in Spanish.

ALL the words in the Spanish language end in one of these twelve letters—*a, d, e, i, l, n, o, r, s, v, x, z*—and are subject to and governed by two articles, one of which we may call the masculine, and the other the feminine, the masculine being *el*, and the feminine, *la*; so that all nouns must agree with one of these two; as, the man, the horse, the tree, the book, the city (*fem.*), the house (*fem.*), the window (*fem.*), the chair (*fem.*). Each article varies in four ways in the singular, and the same in the plural, and each of these inflexions

must be similarly in agreement with the noun. They are as follows :—

Sing. *el*
este
esse
aquel

Sing. *la*
esta
essa
aquella

Plur. *los*
estos
essos
aquellos

Plur. *las*
estas
essas
aquellas

The cause of this variation of the article arises from its use ; we employ *el*, when we suppose the thing to be before us, and thus we use it in such a phrase as : “Bring the horse,” “Go for the carriage.” When we use the form *este*, it is commonly and most appropriately when the object is within the reach of the speaker, as *este guante*, *este papel* (this glove, this paper). The form *esse* we use when the thing named is not within our reach, but within that of the person spoken to, or near him ; thus we may say, “Give me that (*esse*) book.” The form *aquel* presupposes that the object spoken of is at a distance. The same rules apply to the plural forms, the only difference being that they are used when we are speaking of many things instead of one, and what we have said of the masculine gender holds good of the feminine also.

We use, too, the syllable *lo*, which is subject also to concord, like *el* and *la*, and this we shall not term an article (though some would give it the place of what is called in Latin the neuter article), as does Juan de Miranda in his *Observations on the Spanish Language*,

which he sought to teach by the aid of Italian. And Ambrosio de Salazar holds the same opinion in his *Dialogues*, where he sought to teach the language by means of French ; but according to our opinion, this, as well as their subjecting our language to cases, was a mistake ; for the same arguments do not hold good with Spanish : for while this article in Latin is so distinct from the masculine and feminine articles that it has no connection with them, nor they with it, this is not the case in Spanish, since there is no noun in our language which cannot be used with either *el* or *la*, and therefore there is nothing left for the neuter gender to apply to. And thus it would be erroneous to call this *lo* the neuter article ; it is indeed so contrary to the neuter gender in its signification that, while in Latin it marks something which neither partakes of the masculine nor of the feminine gender (whence our use of the phrase, “ such a one is *neutral*”), in our language, on the contrary, the particle *lo* is one which applies to both, having no nouns belonging to it individually.

The *lo* also varies in four ways, viz. *lo*, *esso*, *esto*, *aquello*, in the same way as do the articles *el* and *la*, in the singular ; but it has no plural like these, nor is there any need, since both singular and plural are included in these four forms, and similarly they embrace both genders, as in saying, “ *Dadme lo que esta alli, tomad esso, guardad esto, alcanzadme aquello,*” we refer to things that may be of either gender ; and thus it cannot be properly called an article, as it has no nouns which peculiarly belong to it. If we had to call it an article it would be the “ common ambiguous ” one, since it is used of both genders indiscriminately.

And as there is no other gender but these two, we shall submit all Spanish nouns to them, reducing them to rules according to their final letters, so that the deaf-mute may know to which he has to apply the article *el*, and to which the article *la*; and by this means he will learn to speak correctly.

CHAPTER XII.

On the gender of each noun, and the exceptions to the rules.

THE genders, in the names of things, are no inherent qualities of the things, because nothing naturally possesses a name (and it is from the name that the idea of gender arises); but the names are conventional, each language giving its own, and so diversely that the same substance which the Spanish call *piedrá* (a stone), is called in Latin *lapis*, and also, as in Greek (whence the word is derived), *petra*; in Hebrew it is called *heben*, in Arabic *lechechar*: so that of these names four are quite distinct, and this is the result of their not belonging to the object by nature. This example also shows that it is the names, and not the things, upon which the gender depends; for even with the same thing the Latin has one word which is feminine and another which is masculine, so that it is clearly the *names* of objects that cause the variation of gender, with the exception of the classes of things which are male and female, which usually, in the languages with which we are dealing, follow the article and gender of their sex. In Spanish there are, as has been said,

these two genders agreeing with the articles *el* and *la* ; and in those nouns which have no relation to sex, the gender is governed by the final letter, and we shall follow this rule in classifying them.

All nouns ending in *a, ad, ed, id, ud, ion, as, ez, iz*, are of the feminine gender, and since there are only two genders, all the rest will belong to the masculine ; so that we might leave these without enumerating them, but for the ignorance of the deaf-mute, which renders it often necessary to give things at their full length. And it must be borne in mind that, in what follows, those nouns which signify male or female objects follow the article of their own gender, not being regulated by the final letters of the names, but by their signification.

RULE FOR THE FEMININE GENDER.

All nouns are feminine that end in a, ad, ed, id, ud, ion, as, ez, iz.

But as these general rules are subject to some exceptions, we shall here give those that we have been able to find in the Spanish Dictionary of Antonio de Nebrija.

(Here follows a list of nouns which are masculine, though by this rule they should be feminine.)

* * * * *

RULE FOR THE MASCULINE GENDER.

All nouns are masculine that end in e, i, o, al, el, il, ol,

ul, an, en, in, on, un, ar, er, ir, or, ur, es, is, os, az, oz, uz,
ax, ex, ox.

(Here follows a list of exceptions to the above rule.)

* * * * *

Some nouns there are which we might call common to both genders, since they can take both articles, as *el infernal seno, la infernal furia*. We must notice that *infernal* here agrees with *el seno, la furia*, as an adjective, but having, though an adjective, no declension, it is used in the same form for both genders, and there are other similar examples. There are also some which we use interchangeably, sometimes as of one gender, sometimes of the other; and to save confusion it appears better not to make them exceptions, since we are seeking the simplest possible method. But it seems the best plan to include them under one of the two classes, and since it would always be unsatisfactory to the pupil to find under the feminine nouns a word which he had been told was masculine, and *vice versa*, it is a great mistake to put these nouns under both articles, as, *la orden* or *el orden, el arma* or *la arma*, although they are used with both. But as we have to include these and similar nouns in one or the other of the two classes, it is clear that the most accurate way will be to put them in that one with which we find both their singulars and plurals agree, *i. e.* the class which agree with the article *la*; for it is quite accurate to say *la orden, las ordenes, la arma, las armas*; but not *los ordenes, los armas*. And as the singular of *las* is *la*, we have kept to the rule of seeking these words by the plural article, and under whichever

we find them they will belong to the class of the corresponding singular article ; excepting in the case of those nouns which in the plural may be of either gender, as, *la mar*, or *el mar*, and in the plural *los mares*, etc., which are the only nouns we can properly call common to both genders in Spanish.

The instruction of the deaf-mute in these rules for the genders has to be performed by giving him to understand the meaning of the word "termination." And for this purpose the teacher must write out for him several words ending with different letters, and ask him by the finger language in what letter each word terminates, making him pronounce the word with his mouth. And it is clear that he will not understand the meaning, and will answer that he does not know, or will shrug his shoulders ; and he must then be shown by the manual alphabet the letter in which it terminates, the teacher also pointing to the letter with his finger. And then going on to a word with a different final, he must be asked the same question again ; and if this time he answers right, he must be made to understand that he has succeeded. And so they must all be taught, going from one to another, and turning back again to those first learnt, until he knows them all and can say in what letter any word in a book ends, since this lesson is not intended to be confined to those words alone that are given above.

When he has become well versed in this, he must be taught the rules for the genders by the easiest method, which will be by naming various things previously learnt, and of which he knows the names, saying that a word which ends in *a* is of the feminine gender, and one ending in *o* is masculine, and then

showing the object and letting him pronounce its name ; as *la boca* (the mouth), *la barba* (the beard), *la espada* (the sword), etc. ; and then telling him *el sombrero* (the hat), *el zapato* (the shoe), *el cuello* (the neck), *el dedo* (the finger), so that he may see that they end in *o* ; and afterwards, when he knows the rules well, he must be taught the exceptions, because to teach them among the others would confuse him. And the rule relating to words ending in two or in three letters will be taught him in the same way as the others.

Having repeated this two or three times, he must be told the names of the words he has already learnt, with the article, and must be asked to say in what vowel each one ends, when he will say "in *a*," and he must then be asked the gender ; and if he is right he must be told to join the article to the noun, as *la boca*, and so on with all the nouns according to their gender ; and when this is mastered the teacher will give him false concords, to see if he knows what they ought to be ; as by saying *la sombrero*, *el boca*, and if he does not correct them he must be told that they do not agree, for *sombrero* ends in *o*, and is of the masculine gender, while *boca* ends in *a*, and is feminine ; and in this way we must teach him all the other genders of which there is need to take note.

CHAPTER XIII.

Rule for teaching the deaf-mute the plurals of nouns.

IN a similar way to that in which the deaf-mute has learnt the names of the nouns in the singular he has now to learn the plurals ; and this would be an entirely

new process if we had not discovered a method of teaching it by a general rule which is so comprehensive and certain that it will be all that is necessary: we mean that all the nouns in the Spanish language that end in *a*, *e*, or *o*, form their plurals by adding *s*—as, *pluma*, *plumas*; *guante*, *guantes*; *libro*, *libros*; and all nouns ending in any of the other letters in which they can terminate in our language, add *es*—as, *crueldad*, *crueldades*; *dosel*, *doseles*; *licion*, *liciones*; and this rule is absolute, for although we have carefully searched we have not found any noun that forms an exception to it but *maravedi*, which makes *maravedis*, and not *maravedies*.

This rule has to be taught by writing the names of certain objects which are within view; as, *un sombrero* (a hat), *un guante* (a glove), *una silla* (a chair), *un bufete* (a desk), and then pointing with the finger to each thing, and showing him at the same time the name, which has been previously written down, which, as has been said, must be in the singular; and the deaf-mute will read *sombrero*, *guante*, etc., and indicate with his hand which it is. The teacher must then add another hat, another glove, or whatever they are using for the purpose; and then, showing him the two hats, or the two gloves, indicate with his finger that there are two of each, and the pupil will again say *sombrero* or *guante*, because he has not learnt to distinguish so as to say *dos sombreros* (two hats), until he has been taught. The teacher will then add an *s* to the written words *sombrero*, *guante*, etc., and make him read them, when he will say *sombreros*, or *guantes*. He must now be made to understand by a gesture of

applause that he is right, and the same method must afterwards be followed with other objects in the same manner, lest he think it is only with *sombreros* and *guantes* that this rule holds.

And in order that he may not think that the rule only applies when the objects are two in number, he must be shown that it is the same in the case of many; this may be done by first showing him two fingers, and afterwards all five, joining them together and moving them about, which is the sign the deaf make for "many," and spelling the word "many" on the fingers. This having been done by signs, the master must proceed to teach him the rest by a process of reasoning, first telling him by writing (which is better for this purpose than the finger alphabet) the names of some things he has not had before, and which should be things he is acquainted with; as, *la vela*, *la cama* (the candle, the bed), etc. And as he reads the names he must be shown with the finger that there is only one, so that he may say *vela*, *cama*; and then, all the fingers being moved about, as described above, he will reason from what he did before that he has to add an *s*. If he does so he must be told that he is right; but if not, he must be shown the *s*, from which he will learn that this letter has always to be added when there is more than one object; and at the same time he must be told they are plurals. But he must first be taught with things the names of which end in *a*, *e*, or *o*, as is the case with the examples given. In this way he will understand that all nouns with this letter added signify more than one object.

To teach him the rule for the nouns ending in other

letters, to which he has to add *es*, we must give him a list of nouns—first, of some ending in *a*, *e*, and *o* ; and next, of some ending in other letters, all in the singular—and make him read the list ; as each word is read making the movement of the fingers and adding *s* ; but, on coming to those that require the *es*, we must make the same movement of the fingers, and tell him to pronounce the word, which he will probably do erroneously, since supposing the word to be *tapiz*, he will say *tapizs*, upon which we must add *es* to the written word, telling him by writing or by the finger alphabet that it is only to those words ending in *a*, *e*, and *o*, that the *s* alone is added ; while to those that end in other letters he must add *es*. Then by changing the nouns, and asking him sometimes those of one class, sometimes those of the other, he will be able to understand.

CHAPTER XIII. (*bis*).

On the nature of the verb, and how it may be known.

THE word which we call a verb is the third part of speech, and may be known from the fact that almost all verbs end in *o* in the first person, as the Latin grammarians call it ; but there are a few exceptions, as *doy*, *voy*, *estoy*, *soy*, *se*, and in order that the pupil may better understand what is meant by the first person, and by the verb, he must be told that this name is given to those words to which we can prefix *I*, *thou*, *he*—*I* being the first person, *thou* the second, and *he* the third ; and any word to which these can be joined is a verb,

as *I sleep*, which is the verb *to sleep* with the pronoun *I* joined to it; and we can join with it also the others in turn, as *thou sleepest*, *he sleeps*, which we cannot do with a word that is not a verb; and similarly with *I run*, *I read*. They may also be known as words signifying actions being done, or that have been done, or to be done, as, *I read*, which is an action done at the present time; *I read*, an action already done; *I shall read*, an action to be performed; and this cannot be said of any of those words we call nouns or conjunctions.

To teach the pupil these words in order that he may know how they vary, he must learn first the two verbs given below as a general rule for the rest. For if with every verb in Spanish we had to teach the deaf-mute all its inflexions, and also the plurals of every noun, it could only be done by immense labour; but it is easily accomplished by means of general rules, and so it is sufficient to state that all the rest vary in accordance with these two. And he will learn that although he may see in one place *sleep*, and in another *slept*, they both refer essentially to the same action, differing only in tense, the one telling us that the sleeping is taking place at the present time, the other that it took place previously; and as the deaf-mute is not aware of this, every time he sees two words not entirely agreeing in spelling he will naturally think they are quite distinct, but when he has learnt the two verbs here given he will understand that the difference is merely one of tense.

And since verbs signify not things actually having existence, but only actions, they must be taught by imitating these actions as closely as possible; as, *running*, *walking*, *laughing*. And in the case of those verbs

which express states of mind, we must pursue the same method as with nouns of a similar nature. And after each of these two verbs is given a list of the most common verbs in our language conjugated in the same way. And the deaf-mute must commit them to memory, and must at the same time be taught their meanings, so that when he reads or hears any variation of them he may recognize the meaning and the tense.

CHAPTER XIV.

How to teach the deaf-mute the inflexions of the verb for the three tenses.

IN order that the deaf-mute may comprehend the tenses of the verb, it is necessary to reduce them to three only, Present, Past and Future; for to follow the Latin grammar, and teach him the imperfects, would be most confusing; and it is quite sufficient to divide the verb into three tenses, according to the termination. But there are some that cannot be with exactness referred to one tense alone, the signification varying according to the context, and these must be left for practice to habituate him to their use. And in order that he may clearly comprehend the meaning of Present, Past and Future, we must take an illustration from the days of the week, so that he may know that to-day is present, yesterday past, and to-morrow future.

First of all, we must teach him the meaning of the term *Day*, by showing him the brightness of the light: while in the darkness we may teach him that it is

called *Night*; and he must commit these words to memory and on the following day be asked again; and so by contrast with the night he will easily learn the meaning of day. When he knows the meaning of day and night he must be taught the names of the days of the week. Beginning with Sunday, the teacher will say, "This day is Sunday," making a gesture to signify present time, such as the sign of a musical measure; next he will tell him that to-morrow is called Monday, and in saying *to-morrow* he will make a forward sign with his hand, in a curve, to signify an event that has not taken place, that is to say the future tense; but the other days must not be named, until Monday, when the teacher will again name it with the same gesture, viz., "To-day is called Monday," "To-morrow is called Tuesday," making here the forward sign; then "Yesterday was Sunday," moving the hand backwards over the shoulder, which signifies a past event. In this way it is clear that he will learn both the name of the past day and the meaning of the term *Yesterday*; and similarly the name of the next day and the meaning of the term *To-morrow*, and so on with all the days of the week, whence he will learn their names, and also acquire the idea of present, past and future. Then when he is committing to memory the inflexions of the two classes of verbs, the teacher will make the corresponding sign for each tense as given above, viz. those used in teaching the days.

When he is found to have mastered the tenses, he must learn the persons, and for this the teacher will make a gesture as of eating something, and will say "I eat," pointing to himself; then, "Thou eatest,"

making the pupil eat something; next, "He eats," causing some one at a little distance to eat; then all doing it together he must be told, "We eat," the teacher pointing to all including himself; "You eat," excluding himself; "They eat," making the rest go apart, and pointing to them. And the same must be done with the other tenses, the needful signs for each being made. And it must be noted that for every tense, after the variations have been given that it must have by rule, there are additional ones that in certain cases mean the same, while at other times they signify a different tense, according to the context; as, "They asked me what he ate," "*Rogaronme que comiesse*," which signifies that he ate in the past; and, "If I will eat to-morrow," "*Si yo comiesse mañana*," meaning the future; but as the teaching has to be adapted to the capacity of the deaf-mute, we must take care, as we said before, that he is not confused by the imperfect tenses, but he will learn their meaning from the perfect ones with which they are joined; and practice will afterwards teach him the other relation or relations that they have.

CHAPTER XV.

How to conjugate the verb "tomo, tomas," and all verbs which follow its example.

(Here follows the conjugation of the verb "tomo.")

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CHAPTER XVI.

List of the verbs that are conjugated like "tomo:"

Abaho, abahas ;

Abalanço, abalanças, etc., etc.

* * * * *

THESE verbs which we have given above, vary altogether in the same way as *tomo*, *tomas*, with the exception of a few that make some changes in the letters in certain of the inflexions—as, *abarco*, *abarcas*, *abarque* ; *abarranco*, *abarrancas*, *abarranque* ; which change the *c* into *q* ; and others which interpose a letter among their finals, as, *ahogo*, *ahogue* ; but the general resemblance in sound to the example, *tomo*, will preclude the deaf-mute from being confused by the interposition of a single letter ; and he will pronounce it in accordance with that verb.

CHAPTER XVII.

Exceptions : the verbs "doy," "estoy," "soy" and "voy."

THE following verbs, *doy*, *estoy*, *soy* and *voy*, are exceptions to the general rule, for although in the present tense they follow the inflexions of the verb *tomo*, in the first person of the past tense they make *di*, *estuve*, *fuy*, and the last also in the first future tense makes *ire*. And in the sixth future tense they make *diera*, *estuviera*, *fuera* ; and in the eighth, *diesse*, *estuviesse*, *fuesse*.

In order to teach the inflexions of these verbs we give here the first and second persons of each tense,

and from this the pupil can find out what the others will be.

(Conjugation of the verbs "doy," "estoy" and "soy.")

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With regard to the last verb, *voy*, the inflexions do not all properly belong to it; but of the four which form the exceptions, three are taken from the verb *soy*, and the form *yre* is derived neither from *voy* nor from *soy*, just as the Latin verb *eo*, *is*, is used with similar variations.

CHAPTER XVIII.

On the conjugation of the verb "como, comes," and all the verbs conjugated in the same way.

ALL the verbs commonly used in our language we have collected in two classes, under two general rules: the second is that of the verb *como, comes*; and as some of those that follow its conjugation differ from the others (in the infinitive) by ending in *er*, while these end in *yr*, we shall put them in two divisions, to prevent the confusion that might otherwise occur.

(Conjugation of the verb "como.")

* * * * *

(List of the verbs which are conjugated like "como.")

* * * * *

(Verbs which form exceptions to this rule.)

* * * * *

Certain verbs in our language do not preserve in the second form of the present the derivation from the first past tense which is usual, and others are irregular in all four forms, not following the regular derivation; and in order that the deaf-mute may know what verbs have this irregularity, we give a list of the verbs and their compounds which form the exceptions.

(List of exceptions to the above rule.)

* * * * *

These verbs must be learnt by the deaf-mute so that he may know how to inflect the simple forms well, understanding what are the parts which vary, and he will then be able to conjugate the compound ones.

CHAPTER XIX.

On the verb "soy," "eres."

THIS verb *soy* varies in Spanish as well as in Latin, in such an irregular manner that it cannot be referred to any example, and must therefore be taught the deaf-mute separately, by means of the three tenses, making use of the same signs as before; and he will thus learn it in the same way that he learnt the verb "*como*" before. And this being learnt, the teacher must take care to bring it into the conversation when talking to him, and in this way he will learn its use.

(Conjugation of the verb "soy.")

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CHAPTER XX.

How to teach the deaf-mute to count.

THE list of verbs which we have given here in order that the deaf-mute may grow accustomed to them, and go on to commit them to memory and learn their meanings, must not prevent him from prosecuting other studies ; for it is not necessary that he should know all this before proceeding further.

We shall now teach him to count ; and the same person should teach him, reading over this rule, which serves for two purposes—viz. to teach him the names of the numerals, and to show the characters which represent them—

1 = *uno.*

2 = *dos.*

3 = *tres.*

* * *

100 = *ciento.*

When he has thoroughly learnt the names of these numbers, and understands their value, he must be shown how to use them, employing peas as counters, and showing him quantities corresponding to the numbers in the book, until he is so practised that if he is told any number he can give the right number of peas ; and he must be next taught to join them together in the following manner.

Twice 1 = 2

Twice 2 = 4

Twice 3 = 6

* * *

Ten times 10 = 100

In this matter of counting it is sufficient for him to know thus far, so long as he is unable to speak and understand well ; but when that is mastered he may learn the rules of arithmetic just as others learn them.

CHAPTER XXI.

How to teach the deaf-mute to compare things.

THE names of qualities have to be taught, so as not merely to give the knowledge of the words, but also their meanings—as, *great, little, high, low, wide, narrow, long, short, cold, hot, clear, obscure, good, bad, heavy*, and similar terms ; and also the colours of things, putting objects of that nature before him that he may understand the meanings.

He must then proceed to learn the differences between things that are much alike, but which have some distinguishing features ; and this will be done by showing him two things of a class, and asking him by signs in what they differ from one another. This he will not know, since he does not know the meaning of the question ; and it will be necessary therefore for the teacher to give the reply himself, telling him on the fingers the reason why the two things differ from one another—as, for instance, if we were to show him two books, the one larger than the other, he will have to say, pointing to the larger, “ Because it is larger.” And then he must do the same with two things of the same length, but not of the same width, although agreeing in other respects—as, for instance, with two ribbons, which the teacher will show him, asking him in what they differ,

and seeing that he hesitates he must show him by signs that one is wider than the other, measuring them before him, and telling him again if he still fails to understand. And he must then be shown two other things which are alike in every respect, except in length, and asked again the same question ; and either he is very slow of intellect or he will give the right answer : but if he does not he must be shown again, and told until he has learnt the lesson.

After this the teacher must show him two other things of the same size, but of different colours, and ask him the same question, showing him that they are the same size and leaving him to reply, though he may be wrong ; for he may be right and say this is green and that is yellow, or he may give the same answer as he did to the former things, as by saying that this is longer or wider than the other, supposing he has to say the same as before. And if he says so the teacher must say he is wrong, and measure them both so that he may see that they are equal ; and if then he does not give the right answer he must be told that one is green while the other is yellow, and this must be repeated until he understands. And then two more things must be set before him, also alike in every respect except in colour, taking care that they are different from the last, and the same question must be asked again, until he can answer perfectly. After this the teacher must set before him two things alike in every respect, as two plates, or two candlesticks, of the same material and form ; and as to these he must reply that they do not differ at all, for there is not always a difference between things. And if he says that they differ, for he may think he is

always to give the same reply to the questions, he must be shown that they are both alike, and without any difference.

In this lesson he ought to be well versed ; and this can be easily accomplished, for it is the very threshold of reasoning ; and he must learn that words are concepts by which he is to express what he thinks ; and with this view he will have to be asked many questions about different things, some of them so similar as to demand feeling rather than sight to distinguish them, and these he must weigh in his hand, so as to recognize differences in things that need some consideration.

CHAPTER XXII.

How to teach the deaf-mute to employ language intelligently.

THE mother's language is learnt by signs, since the child sees the action which has been done, or is being done, or is to be done, and thus knows the meaning of the words spoken ; and so, in order that the deaf-mute may become intelligent and capable, it will be an important part of his education that he be asked every evening what he has done in the daytime ; and though, which will certainly be the case, he does not at first answer correctly, he must be asked again and again, and when he makes a sign that he does not understand the question, the master will tell him as much as he knows of what the pupil has been doing during the day. And as he knows the names of objects and of actions he will necessarily reason that when he is

asked, it is for the purpose of obliging him to say and tell us by means of words what we desire to know or what he desires to tell us ; and for this reason he must be asked all the questions used in our language, as, "What are you doing?" when he is doing anything ; and if he does not know what to answer the master must reply for him, saying, "I am reading, writing, playing," etc. And similarly when he is doing nothing, that he may understand that he is not always obliged to say that he is doing something.

Then he should be asked whence he comes, whither he is going, why and when he is going, what he wants, and other questions suitable to the occasion ; but always about things to which the questioner is able to reply, that he may tell the pupil what to say, or assist him to say what he does not know, until he has had sufficient practice to be able to do it satisfactorily. And since the object of this lesson is to make him speak intelligently and properly, it will be necessary, in order that he may be careful about this, to teach him the names of things which are very much alike, to distinguish them from one another—as, *go*, *walk*, *run*, which refer to the same action, but on account of the difference in speed implied have different names and different significations. And thus he must be taught the names and meanings of such things, and having learnt them he must be asked what is the difference between going and walking, or between walking and running, and he must perform the action. And similarly with coming and going, showing him that we call it *coming* when some one approaches us, and *going* when he leaves us ; between dancing and ballet-dancing, in

that the hands are not used in dancing, but they and the arms hang down and the action is only from below the knee, while ballet-dancing is the motion of feet and arms, the arms being held up and the fingers shaken; between reaching for and stooping for, since in exactness "to stoop for" (*alzar*) is to pick up that which is low, while "to reach for" (*alcanzar*) is to stretch up for what is high. And he must learn too that the latter also means to follow some one until you come up with him, and that *alzar* also means to guard. Similarly, the difference between open and shut, and other actions that are so much alike that he may be led to transpose their meanings.

CHAPTER XXIII.

Upon the books that the deaf-mute should read in order to learn; and whether there are sufficient rules to teach him to know by the motions of the lips what is said to him.

WHEN the deaf-mute has learnt what we have taught already he must begin to read in books which are not on difficult subjects, but about easy and common things, and he must be asked to give an account of what he reads; and if he cannot, the teacher must explain to him, but always bearing in mind the warning given above with regard to the passions of the mind. At this stage, also, he should be asked to reply to some written questions by writing, care being taken that the subject of the questions be something that he knows, since the

object of this part of his education is to teach him to combine words in their proper order in a continuous conversation, and to unite sentences; and then on learning new things he will be able to narrate them as well as other things he knew before. When he makes a mistake, as in leaving out a conjunction, or making a false gender or tense, he must be corrected, both when speaking on the fingers, and when he is writing. And when he has made some progress in his reading, and in answering questions put to him either on the fingers or in writing, the books and the conversation may be changed at the discretion of the teacher, who will be able to judge of the pupil's capacity.

For the deaf to understand what is said to them by the motions of the lips there is no teaching necessary; indeed, to attempt to teach it would be a very imperfect thing, for though it might appear possible to reduce it to a system it could not be universal, but so special as to be only understood by the master and the scholar. For in speaking we pronounce the sounds corresponding to the letters by the formations which we make with the mouth: these and the differences between them the deaf-mute knows already, the greater part of them consisting of motions of the tongue, as has been already shown. And in order that he may read what the teacher says he must see the formation of every letter, just as when he is spoken to on the hand he has to see the motions of the fingers, since the letters are formed by these, and the deaf-mute sees and reads them. And it would be an unwarrantable thing to expect all who speak to the deaf to do so with the mouth widely opened; while in the tone in which we usually speak

we do not hold the mouth open widely enough to show the movements of the tongue within it, and without seeing these the pupil cannot understand what is said, since these movements serve him for letters ; and he will fall into the habit of speaking with grimaces, seeking to utter what he has to say with the same mouthing that is used in speaking to him, which would be a great fault. But the reduction of the motions to a system to enable the deaf-mute to understand by the lips alone, as it is well known many of them have done, cannot be performed by teaching, but only by great attention on their part ; and it is to this that their success is to be attributed, and not to the skill of the master. And this is proved by the fact that those who have attained to this power have done so without being taught, further than necessity has taught them with the great assistance of nature, which is wont to supply the loss of one sense by another, as is the case with the deaf-mute. Nor is there any reason to expect that it could be taught by the master, for as one person cannot teach another what he is himself ignorant of, so neither can the teacher give rules to the deaf-mute to enable him to understand the motions of the lips, when he himself does not understand the lips of those who converse with him ; from which we conclude that there are no fixed rules by which he can be taught this ; and if anyone claims to have done this it will really have been done, not by the master but by the pupil, whom he is seeking to deprive of this honour in order to confer it upon himself. For when people see him speak, read and write, and at the same time understand much of what is said by the movements of the lips, they are persuaded

that the whole has been due to teaching, and the master seeks to obtain the credit of it. And although the powers of man are so great that we expect from them results as great as that of which we are speaking—viz. the teaching the dumb to speak, which appears itself a wonderful thing when the senses of hearing and sight are wanting—yet it cannot be expected that there are sufficient fixed rules to supply the lack of movements of the tongue unless the mouth is opened in an unsightly manner, which would be a great defect; but the acquisition of this power must be left to the great attention of the deaf-mute, who can do more than we ourselves in this respect.

We shall conclude this subject and the work in supporting what we have said by the words of Lactantius Firmianus, who says that the tongue by its movements within the mouth renders articulate in words the voice, which is the interpreter of the mind; but the tongue alone cannot perform its duty, needing the aid of the teeth, lips and palate; on account of which children cannot speak until they have teeth, and old men who have lost them pronounce badly: whence it follows that the tongue is not the only instrument concerned in the formation of speech, but the palate, teeth and lips have also to be brought into play. And in order to understand by means of them we should necessarily have to see them all, we who are not aided as the deaf are by nature, in supplementing the want of a sense. And, indeed, when they attain to this power it is not with sufficient certainty to sustain an argument or a conversation, but only for common-place phrases, which are of such frequent use that the deaf-mute catches the

meaning even without seeing the movements of their formation ; his reason here also coming into play and aiding him to mark the action of the speaker, the person and the subject of which he is conversing, and the time and occasion of the theme.

The deaf-mute must, therefore, have great control over himself, by means of close attention and reasoning, as some have attained to without instruction ; and with this we shall conclude this method of teaching, since we have written enough to show that deaf-mutes are not really so, as far as speaking and reasoning are concerned, but are simply deaf, and capable of learning any language or science ; and as much as can be explained to him or to his teacher has been detailed in the rules we have given.

It has not seemed worth while to give rules for the adjectives, because the exceptions would have to be so many, and this would occasion much confusion, which we have avoided with particular care, in order that the deaf-mute may not be hindered, but may speak with ease ; and this cannot be done by those who learn a language with a great variety of rules, like Latin and Greek ; but habit and practice will teach how to unite the adjectives with the nouns.

Counting has to be taught in the usual manner ; and when he has learnt to count up to 100 (in the way before described), he may go on to learn the rest in the same way ; and similarly he will be taught all the rules of arithmetic.

Writing may be taught after learning to read ; and to save time in the process, both for his own sake and his teacher's, it will be well to make him continue for a

long time forming these letters, *l*, *m*, *n*, and *o*, because our whole alphabet is composed of these, *i.e.* of a line or a circle carefully made ; and though some are formed of half a circle, it is clear that he who is able to make the whole is able to make the half.

SUGGESTIONS FOR RENDERING THIS METHOD USEFUL TO FOREIGNERS.

THE dumbness of which we have so fully treated is an infirmity common to all ; and in order that the remedy here given may be so also, it seems desirable to explain the manner in which it must be used by other nations in order to be of value to them, for it will not be sufficient simply to translate it.

If the deaf-mute belongs to a country where the Latin characters are used in ordinary reading it will be sufficient to translate the work, with the addition that those who use *written* characters different from the ordinary Latin ones used in printing, must explain these characters : which is unnecessary in Spanish, because they are so much alike.

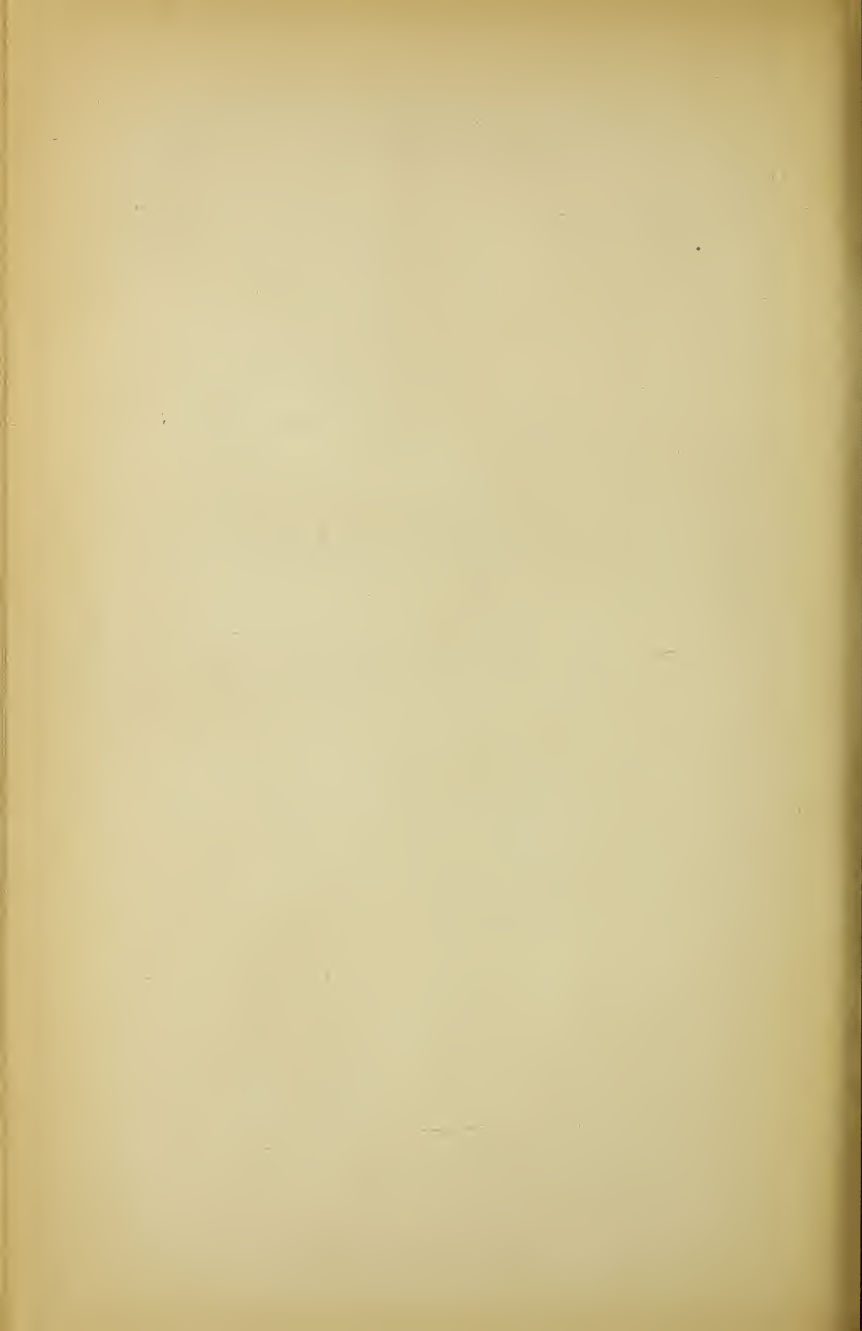
When the letters have all been taught on the fingers in the way described above, the teacher will have to consider whether the simple sound of any letter differs from that given to it in Spanish (which we have taught under each letter) ; and this experiment will have to be made by considering what sound each letter has when it is used in combination with others. This will be the simple sound that has to be taught the deaf-mute, or any one beginning to learn the language, even if he be not deaf ; but for the deaf-mute it will further be necessary to reduce the sound to a demonstration by

the mouth, and for this the teacher must note the positions and motions of his own in order to cause the pupil to imitate the formation.

If he belongs to a nation which uses different characters and different names—such as the Greek, Hebrew, Arabic and others—it must be remembered that the deaf-mute must not be taught the name which each bears in that language, when spoken by itself, unless its name when so uttered is as simple as when spoken in company with and in connection with others ; and if not, the ordinary sound which it bears in speech and reading must be sought for, which in Greek will be the same as in our own—for, if the compound part of the names of the Greek letters be left out there remains the same value and the same simple sound to which we have reduced our Latin ones. The same may be said of the Hebrew, for in neither of these two languages are the letters used with the sound of their full names, when joined with others, but only with a small part of them. And this part in Hebrew will come to represent the same as the Latin sound, with, it may be, a slight difference in certain letters, from their being more guttural ; to which position the mouth must be adjusted ; and, as we have said, it must be the simple sound and not the compound one, that is used in speaking.

All other nations in accordance with this rule will be able to adjust their languages so as to make use of the teaching of this book, following the same plan with all the rules, changing whatever is not in accordance with our tongue ; as, for instance, with the genders of nouns, which are not the same in all languages ; and similarly with the inflexions of the verbs. In order to

teach the deaf to speak, either they must be taught by our simplified Latin letters, or the sounds of the letters of their own language must be reduced to these, which is easy in the case of the Greek, but not so much so in the case of the Hebrew, on account of its gutturals. With the others the facility will be in proportion to the ease with which they can conform to the sounds of the Latin letters, which are, as has been said, "demonstrative." The language must also be one that is pronounced as it is written, or at least one that the deaf-mute can so pronounce, and if it be not well understood it will be the fault of the language and not of this method.



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